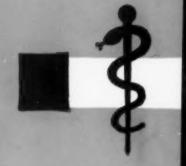
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TIMES

THE JOURNAL OF GENERAL PRACTICE

Diseases of the Prostate in Office Practice Emotional Reactions to Cardiac Illness Disease of the Vulva Why Vaginal Hysterectomy? Weight Reducing Effect of Certain Induced Rhythmic Motions Intestinal Obstruction in the Newborn Executive Health Referring a Patient to a Psychiatrist Exfoliative Cytology Systemic Reaction and Injection of Allergen Tobacco Amblyopia Acute Intermittent Porphyria Biliary Tract Diseases (Refresher) Comparative Law and the Medical Witness Conference Volkmann's Ischemic Contracture (Office Surgery) Investments Highways and Highwaymen Birth Rate Pains What Are Equity Annuities? The Stake in Retail Trade Discounts and Premiums



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IN PNEUMOCOCCAL PNEUMONIA:

injection-like effectiveness from oral penicillin

In a study of 73 patients with mild to moderately severe pneumococcal pneumonia, Austrian and Winston report results with penicillin V [Pen·Vee·Oral] "comparable to those following therapy with parenteral penicillin G..." After only two failures (2.7%) in the series, the authors conclude: "... it is evident that penicillin V... provides a highly effective form of treatment for mild and for moderately severe pneumococcal pneumonia. The speeds of defervescence and of the return of the leukocyte count to normal were comparable to those following therapy with parenteral penicillin G and in no instance was bacteremia, when present initially, found to persist after 24 hours of treatment with penicillin V."

1. Austrian, R., and Winston, A.L.: Am. J. M. Sc. 232:624 (Dec.) 1956

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Suspension



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ORAL PENICILLIN WITH INJECTION PERFORMANCE

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Opinions expressed in articles are those of the euthors and do not necessarily reflect the opinion of the editors or the Journal.

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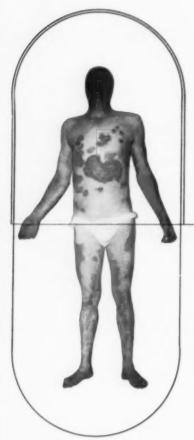
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(Vol. 85, No. 10) October 1957 ELIZABETH K., M.D., Brooklyn, N. Y.

announcing

MARSILID

(Iproniazid)

'Roche'

Mow does Marsilid act?

Marsilid (iproniazid) is an amine oxidase inhibitor which has a normal eudaemonic* rather than an abnormal euphoric effect; it promotes a feeling of well-being and increased vitality; it restores depleted energy and stimulates appetite and weight gain in chronic debilitating disorders.

How soon is the effect of Marsilid apparent?

Marsilid is a slow-acting drug. In mild depression it usually takes effect within a week or two; in severe psychotics, results may be apparent only after a month or more.

What are the indications for Marsilid?

Mild depression in ambulatory, non-psychotic patients; psychoses associated with severe depression or regression; stimulation of appetite and weight gain in debilitated patients; chronic debilitating disorders; stimulation of wound healing in draining sinuses (both tuberculous and non-tuberculous); adjunctive therapy in rheumatoid arthritis when associated with depressed psychomotor activity (Marsilid stimulates physical and mental activity, appetite and weight gain without objective joint changes).

*Eudaemonia is a feeling of well-being or happiness; in Aristotle's use, felicity resulting from life of activity in accordance with reason.

a psychic energizer

(the opposite of a tranquilizer)

What is the dosage of Marsilid?

The daily dose should not exceed 150 mg (50 mg t.i.d.). In patients who are not hospitalized, the dosage should be reduced after the first 8 weeks to an average of 50 mg daily or less. Marsilid is a cumulative drug requiring careful individual dosage adjustment.

Side effects due to Marsilid are reversible upon reduction of dosage or cessation of therapy. It may cause constipation, hyperreflexia, paresthesias, dizziness, postural hypotension, sweating, dryness of mouth, delay in starting micturition, and impotence.

When is Marsilid contraindicated?

Marsilid is contraindicated in overactive, overstimulated or agitated patients. Marsilid therapy should be discontinued two days before the use of ether anesthesia. It should not be given to epileptic patients, or together with cocaine or meperidine.

Marsilid is supplied in scored 50-mg, 25-mg and 10-mg tablets.

MARSILID® PHOSPHATE — brand of iproniazid phosphate (1-isonicatinyl-2-isopropylhydrazine phosphate)

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Philadelphia 1, Pa.



Off the Record

True Stories From Our Readers

Each incident described has been contributed by one of our readers. Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported German apothecary jar will be sent in appreciation for each accepted contribution.

Anything for Nothing

During the initial visit from our first Medicare OB patient we were impressed by the general trend in "welfare state" thinking. The usual interrogation included, "Do you want to nurse (your baby)?" She apparently misunderstood and quickly replied, "Of course, if the Air Force will pay for it!"

J. D. W., M.D. Evansville, Indiana

Impatient

How often do we physicians get calls from patients about their children or themselves at all hours of the night, and how often are we asked, "Doctor, what time will you be over?" I often ask, "Why? Are you going somewhere?", and they answer, "No", but are always puzzled.

L. S., M.D. Dorchester, Massachusetts

From the Mouths of Babes!

The little boy about 4 years of age noticed his mother becoming larger and

larger with her pregnancy. One hot, humid day near term, his mother was drinking more water than usual. The little boy said to her, "Mother, if you don't quit drinking so much water, you're going to bust." Just then the mother's bag of waters ruptured and the little boy said, "See, I told you so!"

Anonymous Blair, Nebraska

Tipsy Driving?

My 31 year old lady patient—a very sweet and well mannered member in our community, was under my care for hypertension—and was very faithful in taking her blood pressure pill every 4 hours.

Her son was driving her to New Jersey to visit relatives, and while cruising down the Merritt Parkway, the little old lady decided to take her pill. She had carried a bottle of water in the car for just that purpose.

She raised the bottle to her lips and drank down the pill. Seconds later, a

-Concluded on page 21s



ENOVID*

BRAND OF NORETHYNODREL WITH ETHYNYLESTRADIOL 3-METHYL ETHER

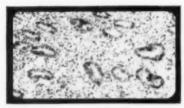
Regulates menstrual disorders through reliable endometropic control

Enovid is Searle's new, orally effective agent designed to provide specific control of menstrual disorders.

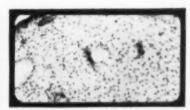
Enovid contains norethynodrel, a new synthetic steroid with strong progestational and lesser estrogenic activity. The estrogenic effect, enhanced by the addition of ethynylestradiol 3-methyl ether, prevents spotting or breakthrough bleeding in most patients in whom it would otherwise occur.

Like the normal endocrine action of the corpus luteum, Enovid maintains the integrity of the endometrium during administration of the drug. Moreover, as occurs on withdrawal of the natural hormone, the withdrawal of Enovid results in the flow characteristic of menstruation. Also, as does the natural hormone, Enovid controls the gonadotropic functions of the anterior pituitary glands.

This specific control of the menstrual cycle permits effective treatment of both excessive and inadequate endometrial activity and provides a dependable agent for treating such disorders as amenorhea, dysmenorrhea, menorrhagia, metrorrhagia and premenstrual tension.



Pretreatment biopsy from patient with anovulatory menometrorrhagia. Interpretation: Proliferative endometrium.



Post-treatment biopsy on day 25 after 10 mg. of Enovid daily from day 5 to day 20. Interpretation: Late secretory endometrium with pseudodecidual stromal development.



Pretreatment biopsy of endometrium in anovulatory menometrorrhagia.
Interpretation: Proliferative endometrium.



Post-treatment biopsy (second treated cycle) on day 19 after 5 mg. of Enovid daily from day 5 to day 19. Interpretation: Early secretory endometrium with slight pseudodecidual reaction.

INDICATIONS	AND DOSAGE GUIDE FOR ENOVID	
DISORDER	FIRST CYCLE	SECOND AND THIRD
Menorrhagia	One or two 10-mg, tablets daily to day 25 of the cycle	One 10-mg, tablet daily from day 5 to day 25°
Metrorrhogia	One or two 10-mg, tablets daily to day 25 (or for 10 days to establish cycle)	same as above
Amenorrhea (primary or secondary)	One 10-mg, tablet daily for 20 days to establish cycle	same as above
Oligomenorrhea	One 10-mg, tablet daily from day 5 to day 25°	same as above
Pramenstruct Tension	One 10-mg, tablet daily from day 5 to day 25°	same as above
Dysmenorrhea	One 10-mg, tablet daily from day 5 to day 25	
Inadequate Luteal Phase	One 10-mg, tablet daily from day 15 to day 25	One 10-mg, tablet daily from day 15 to day 25

*The administration of Enovid prior to day 15 may interfere with ovulation, if anovulatory cycles are not desired, one 10-mg, tablet of Enovid should be administered daily from day 15 to day 25,

SPECIAL NOTES; (1) If nausea is encountered, the daily dose may be cut in half or given in divided doses for three days and then return to regular dose.

(2) Intermenstrual spotting is usually evidence of inadequate dosage. This type of bleeding is usually controlled by increasing the dosage one 10-mg, tablet daily. (3) Following discontinuance of treatment, the intermenstrual interval of the first

untreated cycle is commonly prolonged for approximately one

week.

FORMULA: Each 10 mg, tablet of Enovid (available as un-coated, scored, coral tablets) contains norethymodret, a new synthetic steroid, with 0.15 mg, of ethynylestradiol 3-methyl

Biopsy photomicrographs courtesy of Anna L. Southam, M.D., New York, N. Y.

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Early potent therapy is provided against such threatening complications as sinusitis, adenitis, otitis, pneumonitis, lung abscess, nephritis, or rheumatic states.

Included in this versatile formula are recommended components for rapid relief of debilitating and annoying cold symptoms.

Adult dosage for ACHROCIDIN Tablets and new, caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

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symptomatic relief . . . plus!

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TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND

Tablets

Each tablet contains:

ACHROMYCIN® Tetracycline 125 mg.
Phenacetin 120 mg.
Caffeine 30 mg.
Salicylamide 150 mg.
Chlorothen Citrate 25 mg.

Syrup

Each teaspoonful (5 cc.) contains;

ACHROMYCIN® Tetracycline
equivalent to tetracycline HCl 125 mg.
Phenacetin 120 mg.
Salicylamide 150 mg.
Ascorbic Acid (C) 25 mg.
Pyrilamine Maleate 15 mg.
Methylparaben 4 mg.
Propylparaben 1 mg.





police siren blasted by them and forced them to stop.

"Drinking party, eh?"—shouted the officer tersely. "O.K., let me have the bottle."

True enough, the bottle was a gin bottle with the labels still intact—only it had water in it.

Result-3 red faces.

F.S.B., M.D.

New Britain, Connecticut

That's Gratitude

It was many years ago, and I did my share of deliveries, in addition to working hard at general practice.

One of the mother's-to-be had had about four miscarriages previous to her current pregnancy. Throughout the first eight months, in addition to her regular visits, she did not hesitate to call my office at least once per day, ply me with foolish questions and make a complete nuisance of herself.

I tried to please her as much as I could, and, I guess, feeling sorry for her furnished me with the patience that she so sorely tried. Moreover, during her last month she came to my office every day and insisted on a thorough physical each time—at no extra cost!

The delivery was uneventful and everything went along quite well. The payoff? — She called my office several weeks after her son was born (and she called just about every day since his birth) and learning that I was going to leave on my hard earned two weeks vacation did not hesitate to tell me, and subsequently almost all her acquaint-

ances in the neighborhood, that I "had my nerve to go on a vacation and leave her alone with such a young child."

A.E.B., M.D. Brooklyn, New York

Patience versus Pain

Many years ago, I had an emergency call in a rural area of Connecticut. A young boy (about 10 years of age) had fallen backward into a large fox-trap set by himself and playmates. He was in great pain as one of his testicles was caught in the flanges of the closed trap.

When "yours truly" arrived a large crowd had collected. The boy was shrieking in excruciating pain. These were the days when chloroform anesthesia was considered the ideal and I was about to give it when his aged grandfather appeared from the crowd and with all the solemnity and sagacity of a biblical patriarch he leaned over the prostrated form and said in a low dignified whisper, "Now, Oliver, you must possess the patience of Job."

The boy, a product of a very nice, strictly religious family . . . shouted back in a piping voice, "Yes, by the Great Jehovah . . . but Job never got his rear end in a fox-trap either!"

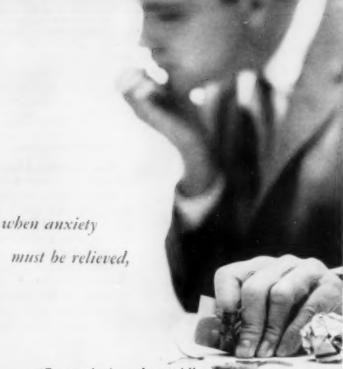
O.L.M., M.D. Simsbury, Connecticut

Tough Racket

The patient's husband said his wife was suffering from nervous prostitution.

R.C.R., M.D. Freemont, Nebraska

*T.M. Reg. U.S. Pat. Off. for prochlosperazine, S.K.F. Patent Applied For



'Compazine' works rapidly.

A few hours after the initiation of therapy, most patients notice a lessening of their anxiety and tension. Improvement continues, reaching a maximum in from 3 to 5 days. Patients are emotionally calm, yet mentally alert.

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Pancreatin, U.S.P. 300 mg 150 mg Bile Salts released in the small intestine from enteric-coated inner

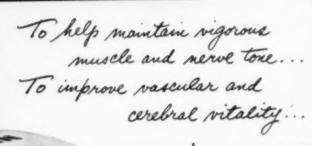
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For comprehensive digestive enzyme replacement-

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Vitamins - Minerals Amino Acids - Lipetropics Bioflavonoids

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LABORATORIES, INC. MOUNT VERSON, N



Diagnosis, Please!

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology, New York University College of Medicine and Director of Radiology, Bellevus Hospital Center

WHICH IS YOUR DIAGNOSIS?

- 1. Tuberculosis
- 2. Sarcoid
- 3. Lymphoma

Answer on page 164a





CATHETERS,
SOUNDS AND
CYSTOSCOPES:
SOURCES OF
INFECTION

before and after urologic instrumentation during indwelling catheterization prophylactically in urologic surgery

FURADANTIN

broad of altrofurantain

"The catheter is probably the most common agent responsible for resistant urinary tract infections. . . . A catheter seeds the bladder with urethral bacteria." 1

During indwelling catheterization, "the urethra is distended by a foreign body for days or weeks. The response to this is production of a sheath of mucopurulent exudate around the catheter, providing a splendid medium for growth of microorganisms. Infection of the bladder cavity is almost inevitable under these circumstances..."

"One further danger of urethral instrumentation is that it may produce a transient bacteremia.... In view of the possibility that infection of the kidneys may take place via the blood stream, the bacteremia of urethral instrumentation probably represents one of the ways in which infection is transferred from lower to upper urinary tract.... Bacteremia has been found in a significant proportion of cases immediately after the passage of a sound or cystoscope."

FURADANTIN

"... may be unique as a wide-spectrum antimicrobial agent that is bactericidal, relatively nontoxic, and does not invoke resistant mutants."a

- RAPID ACTION. FURADANTIN, a specific for urinary tract infections, provides rapid bactericidal action against a wide range of gram-positive and gram-negative bacteria and organisms resistant to other agents including Proteus and certain strains of Pseudomonas. "Nitrofurantoin (FURADANTIN) has been found to be highly effective in the treatment of chronic urinary tract infection following prostatectomy. Treatment resulted in an abrupt fall in the number of bacteria in the urine, and, in almost one half of the patients, sterile urines were obtained during treatment. The drug was most effective against infections with E. coli and B. proteus."4
- EXCELLENT TOLERANCE. There have been no reports of injury to kidneys, liver or blood-forming organs as a result of FURADANTIN therapy. No cases of monilial superinfection, crystalluria or staphylococcic enteritis have ever been reported. In one study, a particularly encouraging finding "was the fact that nitrofurantoin (FURADANTIN) did not cause diarrhea in any of the patients. . . . This might be a consideration in the choice of an antimicrobial drug, particularly if the patient is in the hospital."3
- NEGLIGIBLE DEVELOPMENT OF BACTERIAL RESISTANCE. In six years of extensive use in the treatment of genitourinary tract infections, development of bacterial resistance remains negligible with FURADANTIN.

AVERAGE FURADANTIN DOSAGE: In acute, complicated or refractory cases and in chronic infections of adults: 100 mg. q.i.d. In scute, uncomplicated urinary tract infections, for prophylaxis and postoperatively in urologic surgery: 50 mg. q.i.d. (If patient is unresponsive after 2 or 3 days, increase dose to 100 mg. q.i.d.)

SUPPLIED: Tablets, 50 and 100 mg., bottles of 25 and 100. Oral Suspension, 25 mg. per 5 cc. tsp., 60 cc. bottle.

NOW for hospitalized patients, for severe urinary tract infections when peroral administration of Furadantin is not feasible and for serious infections as septicemia (bacteremia) when the bacterium is sensitive.

NEW, LIFESAVING FURADANTIN Intravenous Solution

FURADANTIN Sensi-Discs for bacterial sensitivity tests are available from Baltimore Biological Laboratories.

REFERENCES: 1. Lich, R., Jr.: J. Arkansas M. Soc. 82:271, 1986. 2. Beeson, P. B.: Yale J. Biol. 28:81, 1985. 3. Waisbren, B. A., and Crowley, W.: A.M.A. Arch. Int. M. 95:658, 1988. 4. Draper, J. W., et al.: J. Urol. 73:1211, 1954.



O,N NITROFURANS a new class of antimicrobials , neither antibiotics nor sulfonamides

EATON LABORATORIES, NORWICH, NEW YORK

for developmental years
orange juice
capably supplies
recommended daily
intakes* of vitamin C



COMMISSION - LAKELAND, FLORIDA
ORANGES - GRAPEFRUIT - TANGERINES



"Sweeping The Bridge"

One day in June of 1956, the local county hospital called me at 7:15 A.M.

The deceased, age 40, had a 32 caliber pistol wound through the silent temporal area of the brain. The victim was general and sales manager of the local auto agency. There had been rumors that he

was a heavy gambler. One half mile out of town was an alleged gambling house which was closed six weeks

later by Ohio State Agents. This establishment had supposedly been in operation the night the victim was found.

The victim was discovered five miles south of town on a covered bridge by a stranger, his wife and three children enroute for a vacation. This was 1:30 A.M. and the victim was alive. However, by 2:15 A.M. he was in the local hospital, comatose. He expired at 7 A.M.

The sheriff and his deputies had a gun positively identified as the victim's. I asked the sheriff about gun fingerprints. "Impossible!" he said. All his department had handled the gun looking for the empty shell . . . and to be sure the gun was empty. One deputy pulled the gun out of his pocket and said, "I would like a pocket gun like this for myself."

The victim's new demonstrator automobile had been found parked

> at the edge of the bridge . . . lights on and motor running. The sheriff's department put the car in storage in a town

garage before the man expired.

A patient of mine who lives in the first house next to the bridge innocently told me, "The sheriff sure worked hard on that case." At 4:30 A.M. that morning she had seen the sheriff and his deputy sweep the bridge. This had happened before the man was dead, and before I was called,

I quizzed the sheriff about the "sweeping of the bridge" and with a red face the sheriff said . . . "Looking for evidence. Found nothing! Nothing!"

From an Ohio coroner.

just one specific therapeutic purpose

to curb the appetite of the overweight patient





3|2 3|1 3|0 2|9 2|8 2|7 2|6 2|5 2|4 2 2

PRELUDIN

(brand of phenmetrazine hydrochloride)

PRELUDIN makes reducing:

Effective because it provides potent appetite suppression, while minimizing the undesirable effects on the central nervous system which may be encountered with certain other weight-reducing agents.¹

Comfortable because it virtually eliminates nervous tension, palpitations and loss of sleep.²

Notably safe because it is not likely to aggravate coexisting conditions, such as diabetes, hypertension or chronic cardiac disease.³

References: (1) Holt, J. O. S., Jr.: Dallas M. J. 42:497, 1956. (2) Gelvin, E. P.; McGavack, T. H., and Kenigsberg, S.: Am. J. Digest. Dis. 1:155, 1956. (3) Natenshon, A. L.: Am. Pract. & Digest Treat. 7:1456, 1956.

PRELIDIN® (brand of phenmetrozine hydrochloride). Scored, square, pink tablets of 25 mg. Under license from C. H. Boehringer Sohn, Ingelheim,

GEIGY

Ardsley, New York



in bronchial asthma and respiratory allergies



specify the buffered "predni-steroids" to minimize gastric distress

combined steroid-antacid therapy . . .

'Co-Deltra' or 'Co-Hydeltra' provides all the benefits of "predni-ster-oid" therapy and mini-mizes the likelihood of gastric distress which might otherwise impede therapy. They provide easier breathing-and smoother control-in bronchial asthma or stubborn respiratory allergies.

SUPPLIED: Multiple Compressed Tablets 'Co-Del-tra' or 'Co-Hydeltra' in bottles of 30, 100, and 500.

hydroxide gel and 50 mg. of magnesium trisilicate.

Co-Deltra



MERCK SHARP & DOHME DIVIDION OF MERCE & CO., INC. PHILADELPHIA 1, PA.

SULFONAMIDE SEMINAR

Q. Which sulfa has wide wrological use because of its safe antibacterial action and unusual analysisa?

A. Ago Cantrisin Rock' is used in about 125,000 patients monthly. With Cantrisin plus phenylago-diamino-pyridine HCI both bactericidal and analgeoic action in accured without renal impairment.

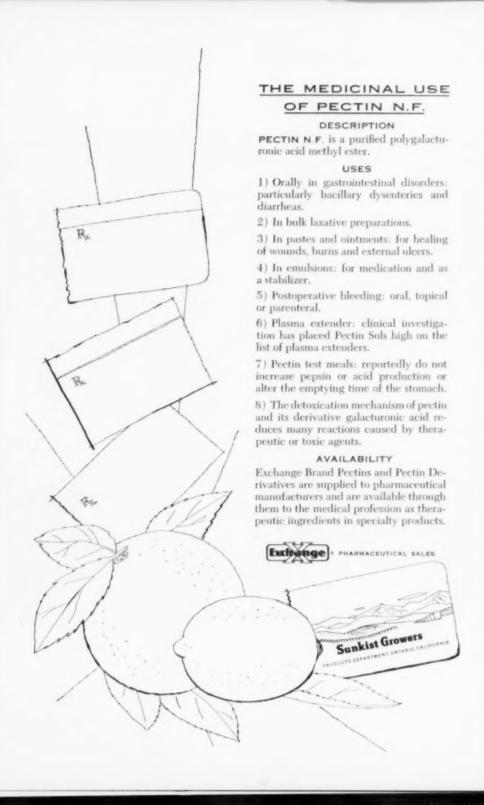
ROCHE LABORATORIES . DIVISION OF HOFFMANN-LA ROCHE INC. . NUTLEY 10, N. J.

SULFONAMIDE SEMINAR

Q. Which sulfor form ensures safe therapeutic blood levels with only two doses a day? Explain. A. Sipo Bantrisin Rocke a lipid emulsion, given orally b. i. d., effectively resolves most systemic local and wrinary infections.

POCHE LABORATORIES . DIVISION OF HOFFMANN-LA ROCHE INC. . NUTLEY 10. N. J.







For anxiety, tension and muscle spasm in everyday practice.

- well suited for prolonged therapy
- well tolerated, relatively nontoxic
- no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness

RELAXES BOTH MIND AND MUSCLE

WITHOUT IMPAIRING MENTAL OR PHYSICAL EFFICIENCY



Miltown

tranquilizer with muscle-relaxant action

2-mathyl 2-8 propyl 1, 3 propanediol dicarbamate = U. S. Patent 2,724,720

Supplied: 400 mg. scored tablets 200 mg. sugar-coated tablets

Usual dosage: One or two 400 mg. tablets t.i.d.

Literature and samples available on request



AN EXPORTANT AN VANCE IN INTERPOPAULAL TERRAL

Because it replaces half control with full control. **Because** it treats the whole menopausal syndrome. **Because** one prescription manages both the psychic and somatic symptoms.

Two-dimensional treatment

of the menopause SUPPLIED; Bottles of 60 tablets. Each tablet contains:

MILTOWN® (meprohamate, Wallace) 400 mg
2-methyl-2-n-propyl-1,3-propanediol dicarbamate,
U. S. Patent No. 2,724,729.

Conjugated Estrogens (equine) 0.4 mg
Licensed under U. S. Patent No. 2,429,398.

DOSAGE: One tablet t.i.d. in 21-day courses with one week rest periods. Should be adjusted to individual requirements. Samples and literature on request.

"Milprem"

MILTOWN®
A Proven Tranquilizer

CONJUGATED ESTROGENS (EQUINE) A Proven Estrogen

WALLACE LABORATORIES, New Brunswick, N. J.
who discovered and introduced Miltown, the original meprobamate,





What's Your Verdict?

Edited by Ann Ledakowich, Member of the Bar of New Jersey

Eight physicians were named in an action by the Attorney General to enjoin them from acting as the State Board of Medical Examiners in the issuance of licenses to practice medicine. As a result of the following events, two separate boards claimed to be the legal representatives of the State Homeopathic Medical Society.

In 1954 the society met for its 79th annual meeting. The principal defendant in this case was elected secretary-treasurer of the society, and a member of the board. The members elected to the board at this meeting are those claimed by the attorney general to be the legally constituted board, subject to any resignations or lawful removals made.

In due course the board scheduled examinations for qualified applicants for licensure. Although the secretary received competent advice that two of the schools in the state were not accredited, and that their graduates could not lawfully qualify for the examinations, he permitted twenty-three such candidates to take the examinations. Contributions to the society of four hundred dollars or more were made by some of the candidates.

Upon learning these facts, the president became alarmed and notified the attorney general. In retaliation, the secretary removed the president from office, acting under the alleged constitution and by-laws of the society. The president ignored this action and called a meeting of the board at which the secretary was removed from office.

In 1956 the 81st annual meeting of the society was held at the instigation of the

secretary. All motions at the meeting were made and seconded by the unqualified applicants who had taken the examinations. The expulsion of the president was ratified, and four new physicians were named to the board as successors to others who were expelled therefrom.

The claim of the members of the original board to legality rests upon the validity of the proceedings at the 79th annual meeting, and the statutory provision that a member selected by the society shall serve for four years. The second board claims that it constitutes the legal board by virtue of the proceedings of the 81st annual meeting.

How should the Court decide?

(Verdict on page 158a)



"Functional vomiting

should be carefully distinguished from organic vomiting. Grave consequences may follow if evidences of organic derangement . . . are masked by treatment designed to control vomiting alone."

Safety First in emesis therapy

Prescribe

EMETROL

(Phosphorated Carbohydrate Solution)

First

SAF

EMETROL will not suppress symptoms arising from organic etiology. It controls vomiting of functional origin quickly.

Dosage: Adults, 1 or 2 tablespoonfuls; infants and children, 1 or 2 teaspoonfuls, as often as every 15 minutes. Always administer undiluted, and forbid oral fluids for at least 15 minutes after each dose. Even if first dose is not retained, continue administration. If vomiting is not controlled within one or two hours, look for organic etiology. For individual dosage regimens in various indications, please send for literature.

1. Bradley, J. E.: Mod. Med. 20. 1, No. 20, 1952.



FOR THE ENTIRE RANGE OF RHEUMATIC-ARTHRITIC DISORDERS — from the mildest to the most severe

many patients with MILD involvement can be effectively controlled with

MEPROLONE

many patients with MODERATELY SEVERE involvement can be effectively controlled with

MEPROLONE



and NOW for patients with SEVERE involvement

MEPROLONE

The first moprobamate-prednisaione therapy

the one antirheumatic, antiarthritic that simultaneously relieves:

(1) muscle spasm (2) joint inflammation (3) anxiety and tension (4) discomfort and disability,

SUPPUED: Multiple Compressed Tablets in three formulas: 'MEPRO-LONE'-5-5.0 mg, prednisolone, 400 mg, meprobamate and 200 mg, dried aluminum hydroxide gel, 'MEPRO-LONE'-2-2.0 mg, prednisolone, 200 mg, meprobamate and 200 mg, dried aluminum hydroxide gel, 'MEPRO-LONE'-1 supplies 1.0 mg, prednisolone in the same formula as 'MEPROLONE'-2.



MERCK SHARP & DOHME

DIVISION OF MERCY & CO., INC. PHILADELPHIA 1, PA.

MEPROLONE' is a trademark of Merris & Co., Inc.



simple, well-tolerated routine for "sluggish" older patients

DECHOLIN

Establishes free drainage of biliary system—effectively combats bile stasis and improves intestinal function.

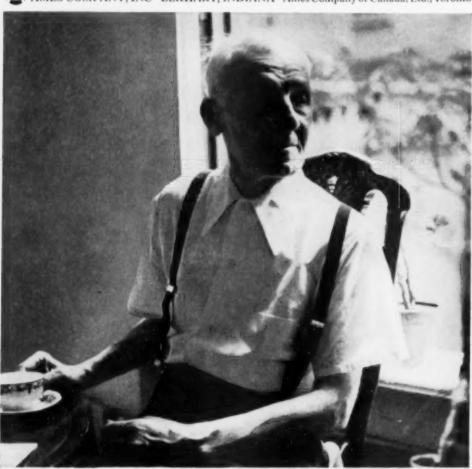
Corrects constipation without catharsis—copious, free-flowing bile overcomes tendency to hard, dry stools and provides the natural stimulant to peristalsis.

Relieves certain G.I. complaints — improved biliary and intestinal function enhance medical regimens in hepatobiliary disorders.

DECHOLIN Tablets: (dehydrocholic acid, AMES) 3% gr.

23797

AMES COMPANY, INC · ELKHART, INDIANA · Ames Company of Canada, Ltd., Toronto



preparation you've asked for

ANNOUNCING: a NEW antidiarrheal for

more certain control of virtually all diarrheas

DONNAGEL*

of the common forms of diarrhea. Neomycin is an ideal antibiotic for enteric use: it is effectively bacteriostatic against neomycinsusceptible pathogens; and it is relatively non-absorbable.

Addition of neomycin to the effective DONNAGEL formula assures even more certain control of most

The secret of Donnagel with Neomycin's clinical dependability lies in the comprehensive approach of its rational formula:

> COMPONENT in each 30 cc. (I fl. oz.)

Neomycin base, 210.0 mg. (as neomycin sulfate, 300 mg.)

Kaolin (6.0 Gm.)

Pectin (142.8 mg.)

Dihydroxyaluminum aminoacetate (0.25 Gm.)

Natural belladonna alkaloids: hyoscyamine sulfate (0.1037 mg.) stropine sulfate (0.0194 mg.) hyoscine hydrotomide (0.0055 mg.)

Phenobarbital (1/4 gr.)

ACTION

adsorbent.

demulcent

protective.

demulcent

antacid,

demulcent

antispasmodic

BENEFIT

antibiotic Affords effective intestinal bacteriostasis.

Binds toxic and irritating substan-

ces. Provides protective coating for irritated intestinal mucosa.

Supplements action of kaolin as an intestinal detoxifying and demulcent agent.

Enhances demulcent and detoxifying action of the kaolin-pectin suspension.

Relieves intestinal hypermotility and hypertonicity.

sedative

Diminishes nervousness, stress and apprehension.

INDICATIONS: DONNAGEL WITH NEOMYCIN is specifically indicated in diarrheas or dysentery caused by neomycin-suscep-tible organisms; in diarrheas not yet proven to be of bacterial origin, prior to definitive diagnosis. Also useful in enteritis. even though diarrhea may not be present. SUPPLIED: Bottles of 6 fl. oz. At all pre-

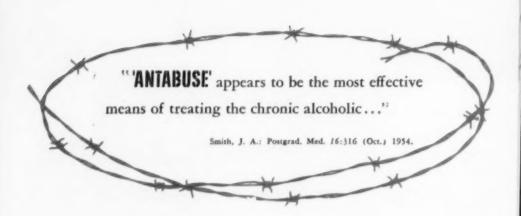
DOSAGE: Adults: 1 to 2 tablespoon-Children over 1 year: 1 to 2 tea-spoonfuls every 4 hours. Children under 1 year: ½ to 1 teaspoonful every 4 hours.
ALSO AVAILABLE: DONNAGEL, the

original formula, for use when an antibiotic is not indicated.

Robins

Informational literature available upon request.

scription pharmacies.



A "CHEMICAL FENCE" FOR THE ALCOHOLIC. "Antabuse" helps the alcoholic resist his compulsive craving for alcohol, and enables him "to respond more readily to measures aimed at the correction of underlying personality disorders." Bone, J. A.: J. Nat. M. A. 46:245 (July) 1954.

"Antabuse" brand of DISULFIRAM (tetraethylthiuram disulfide) is supplied in 0.5 Gm. tablets, bottles of 50 and 1,000.

Complete information available on request



Ayerst Laboratories . New York, N. Y. . Montreal, Canada

5546

Medical Teasers

A Challenging Crossword Puzzle for the Physician (Solution on page 208a)

ACROSS

- I. A surgical needle
- 5 Lard
- 10. The ultimate unit of an element
- in: completely exhausted (collog.)
- 15. City in Northern France
- 16. Increases unit it prefixes 1,000,000 times
- 17. Inequality between responding limbs
- 19. Allments
- measurement of 20. Official weight of coal or grain
- 21. Frames to prevent contact of bed-clothing
- Strait; channel off the N.W. coast of Wales
- 26 201
- 27. Judicial inquiries info cause of death
- 30. Pivotal (as of a joint)
- 34. Group of notes sung all in one breath; lung diseases start with same root sound but with Greek spelling
- 35. Where you get sent when you have a fever
- hand; a hand having the thumb and digits at right angles
- 38. Most doctors have many bills -
- 39. Causing or showing sexual love
- membrane investing the brain and spinel cord
- 42. Conjunctions
- 43. Base of boric acid
- 44. Decorticate lung (collog.)
- 45. Medicinal liquid
- 47. Club-foot with inversion of the foot
- 50. -caine, anesthetic
- 51. Ether containing acid and alcohol radical
- 52. Distand
- 56. Existing without end (poetic)
- 60. the Red; Norwegian
- 61. Tear
- 64. —fode, "threadworm"
- 65. Choice
- 66. Chilled
- 67. Air Service Signal Corps (abbr.)
- 68. Covered walks (Greek)
- 69. -pool, receptacle for waste

(Vol. 85, No. 10) October 1957

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67	+	+	-		48	+	+	+	+		69	+	+	+

DOWN

- s Apple; prominence of thyroid cartilege
- 2. Triangular light area on the drum-head
- 3. Standard of comparison
- 4. Genus of African plants some of which yield oil of benné
- 5. Reagent for blood
- 6. Decease
- 7. A kind of joint of piping or **fubing**
- 8. -ate, lap over and suture
- 9. Vesical sound
- 10. Starch in a state of solution
- 11. Relate history
- 12. What the recuperating male is said to do at the pretty nurse
- 13. Aggregation of matter
- 18. S-shaped curve or line
- 22. Filled with a sour substance
- 24. of Rose; oil
- 25. Useful Radioactive elements 27. Product of the putrefaction of proteins in the intestines

- 28. Relating to the nerve structure (prefix)
- 29. Hunt
- 31. Yawner
- 32. Stake, javolin, pike (Fr.)
- 33. Has to do with
- 36, Ossa
- 39. Miscarry
- 40. Eye-glass of one lens
- 44. Affected with slight peralysis
- 46. Emetic
- 48. Kiloliters
- 49. Mountain sickness
- 52. Great bridge across Zambesi River
- 53. Very (Fr.)
- 54. Edges of something circular
- 55. The -; cripples
- 57. Oryza sativa
- 58. Negative votes
 - 59. Terminations
 - 62 Organization out for more olic health control (abbr.)
- 43 Greek letter

Vitamins and Minerals

S-M-A contains all the vitamins and minerals known to be required by normal infants— in amounts more than adequate to meet the recognized needs of health and growth.

S-M-A is protected by processing techniques that preserve all these essential factors.



for sound infant nutrition





MEDICAL TIMES

Carbohydrate

As with breast milk, S-M-A provides true physiological carbohydrate as the natural carbohydrate for infants. S-M-A has no vegetable sugar. Its only carbohydrate is lactosethe sugar of milk. In amount also, S-M-A carbohydrate (7%) is closely adjusted to the average quantity in human milk.



for sound infant nutrition (Vol. 85, No. 10) October 1967



Instant Powder



Philadelphia 1, Pa

43a

Fatty Acids

Modern studies increasingly relate normal infant metabolism to the dietary content of essential unsaturated fatty acids. Like human milk, S-M-A fat is high in essential unsaturated fatty acids, and supplies in full the calories required of fat in the diet. Its fatty acid pattern closely parallels that of mother's milk.



for sound infant nutrition





MEDICAL TIMES

Proteins

S-M-A contains 1.5 per cent protein, and adequately satisfies the baby's daily requirement for protein.

The important elements in milk protein are the amino acids. S-M-A agrees closely with human milk in its content of these essential substances.

S-M-A protein is complete and adequate.



S-M-A

Concentrated Liquid
Instant Powder

for sound infant nutrition



IN PATIENTS WITH "ANXIETY-TENSION-FATIGUE"



'Miltown' therapy improves the capacity to work efficiently

In patients with anxiety-tension-fatigue, electromyographic studies have shown that tense skeletal muscles cannot easily be made to stop contracting. This is considered a major cause of their fatigue.

Investigators1.2 have reported that after a course of 'Miltown' therapy such muscles can be made to relax at will and can therefore more easily recover from fatigue. The authors consider this of great value in improving the individual's capacity to work efficiently.



400 mg, scored tablets. 200 mg. sugar-coated tablets.

Literature and samples available on request.

1. Dickel, H. A., Wood, J. A. and Dixon, H. H.: Electromyographic studies on mi-probamate and the working, anxious patient. Ann. New York Acad. Sc. 67:780, May 9, 1957,

2. Dickel, H. A., Dison, H. H., Wood, J. A. and Shanklin, J. G.: Electromyographic studies on patients treated with meprobamate. West. J. Surg. 64:197, April 1956.

Miltown of the state of the sta

TRANQUILIZER WITH MUSCLE-RELAXANT



WALLACE LABORATORIES, New Brunewick, N. J.

CM 5447



Photographs with brief description of your hobby are welcomed. An imported German apothecary jar will be sent to each contributor.

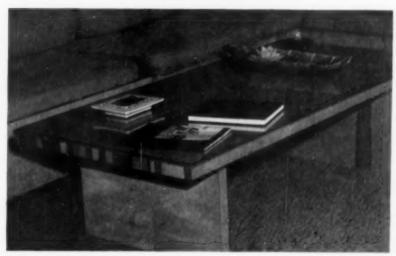


FURNITURE DESIGNING

For the past six years my favorite hobby has been the designing and working of contemporary furniture for my own special uses and those of my friends.

As the need or occasion arises, I make furniture using wood and wrought iron. Lately, I have made several tables using mosaic tile of both ceramic and glass. I have found the latter most interesting, and believe it would prove to be a very good hobby for busy general practitioners.

W. R. RICE, M.D. Dunbar, W. Va.



(Vol. 85, No. 10) October 1957

now "... care of the man rather than merely his stomach."

Miltown® [] anticholinergie

controls

gastrointestinal dysfunction at cerebral and peripheral levels

tranquilization without barbiturate loginess

spasmolysis without belladonna-like side effects

for duadenal ulear . gastric ulcer . intestinal colic spastig and irritable colon . Heitis . esophageal spasm G. I. symptoms of anxiety states

1 tablet t.i.d. at mealtime and 2 at bedtime



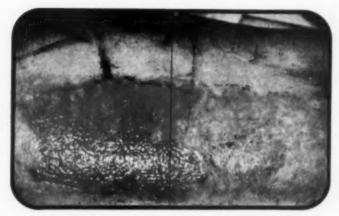
Formula:

Miltownii (nurproismate) 400 mg. (2 - methyl - 2 - n -propyl-1, E-propasediol dicarbamate) U. 6. Patent 2,724,726 tridibeauthyl iodide 25 mg. (5-diethylamina - 1 - cycloheaut -1 - phrapi - 1 - propanol-ethiodida)

I Wolf & Wolf, Burnen Gueric Panels

WALLACE LABORATORIES New Brunswick, N. J. Litteroture and complex on rep

W



Skin graft donor site after 2 weeks' treatment with... petrolatum gauze-still FURACIN gauzelargely granulation tissue completely epithelialized

OBJECTIVE EVIDENCE OF SUPERIOR WOUND HEALING

was obtained in a quantitative study of 50 donor sites, each dressed half with FURACIN gauze, half with petrolatum gauze. Use of antibacterial FURACIN Soluble Dressing. with its water-soluble base, resulted in more rapid and complete epithelialization. No tissue maceration occurred in Furacin-treated areas. There was no sensitization.

Jeffords, J. V., and Hagerty, R. F.: Ann. Surg. 145:169, 1957

FURACIN . . . brand of nitrofurazone the broad-range bactericide that is gentle to tissues

spread Furacin Soluble Dressing: Furacin 0.2% in watersoluble ointment-like base of polyethylene glycols.

sprinkle Furacin Soluble Powder: Furacin 0.2% in powder base of water-soluble polyethylene glycols. Shaker-top vial.

spray Furacin Solution: Furacin 0.2% in liquid vehicle of polyethylene glycols 65%, wetting agent 0.3% and water.



EATON LABORATORIES, NORWICH, N.Y.

Nitrof.rans-a NEW class of a stimicrobialsneither antibiotics nor sulfonamides



SOLUBILITY MEANS SAFETY IN LONG-TERM SULFONAMIDE THERAPY OF URINARY TRACT INFECTIONS

Rapid Renal Clearance Minimizes Risk of Toxic Reactions

Sulfonamides are leading therapeutic agents for the treatment of urinary tract infections because effective bacteriostasis is achieved with minimum risk of superimposed infections or the development of resistant strains. A single sulfonamide featuring high solubility, low acetylation and rarely causing toxic reactions or cross-sensitization would therefore be well suited for prolonged administration.

Sulfonamides maintain an important position in the treatment of urinary tract infections because of safety, ease of administration and effectiveness against most infecting organisms. An editorial in the Journal of the American Medical Association states that for urinary tract infections "... sulfonamides should be tried first."

The efficacy and safety of a sulfonamide depend on the following qualities:

(a.) Broad Antibacterial Index — within the range of urinary tract pathogens.

(b.) High Plasma and Urine Levels - insuring effective antibacterial concentrations in the urine and throughout infected tissues.

(c.) High Solubility – within the range of urinary tract pH to minimize the danger of crystallization.

(d.) Low Acetylation – the drug remains in the active, less toxic non-acetylated form.

"Thiosulfil," a brand of sulfamethiz-

ole, fully meets all of these requirements. Virtually all of a given dose is therapeutically active and is well tolerated because . . .

... "Thiosulfil" is rapidly absorbed and excreted with negligible penetration into red blood cells;

... "Thiosulfil" — in both the active and acetylated form — is highly soluble within a wide pH range;

... "Thiosulfil" undergoes minimal acetylation—only 5 to 10 per cent is inactivated (90-95 per cent remains in the active free form):

... "Thiosulfil" can be administered safely without need of alkalinization or forcing of fluids.

Hughes³ and associates report that patients with incurable chronic urinary infections were kept symptom free for as long as five or six years on a maintenance dose of one or two tablets of "Thiosulfil" daily. Another investigator states that "Thiosulfil' can be taken over a long period of time with practically no untoward side reactions."⁴

Recommended Dosages: 0.5 Gm. four times daily. The pediatric dosage is 30 to 45 mg. daily per pound of body weight. If voiding occurs during the night, an extra half-dose should be given. Fluids may be restricted rather than forced. Availability: Tablets, 0.25 Gm. (bottles of 100 and 1,000). Suspension, 0.25 Gm. per 5 cc. (bottles of 4 and 16 fl. oz.).

Bibliography on request.

AYERST LABORATORIES

New York, N. Y. • Montreal, Canada

Single sulfonamide specifically for urinary tract infections—unexcelled in long-term

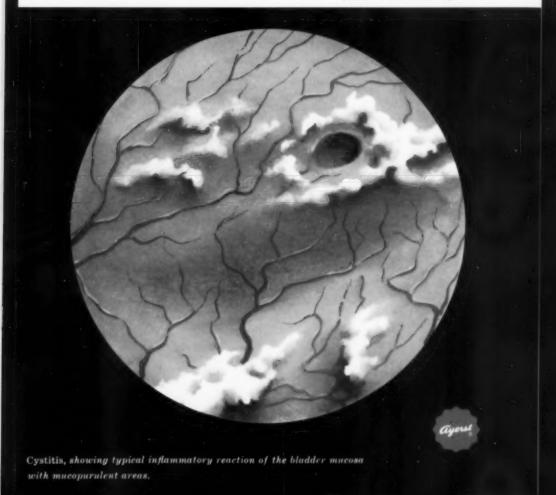
therapy. Gram for gram "Thiosulfil" is unexcelled for effective bacteriostatic action against a broad variety of urinary tract pathogens. High solubility, complete absorption, minimal acetylation, and negligible penetration into red blood cells ensure rapid and effective action with minimal side effects.

Ayerst Laboratories · New York, N.Y. · Montreal, Canada

direct effective

"THIOSULFIL"

(Brand of sulfamethizole)



"MEDIATRIC" helps restore physiologic efficiency when the patient exhibits signs of . . . general debility . . . chronic mental fatigue

In older patients, these symptoms are frequently the first signs of physiologic deterioration. Prompt institution of "Mediatric" therapy may forestall and even reverse premature "damage" and help prolong the active life of the patient.

"Mediatric" — steroid-nutritional compound, available in tablets, capsules and liquid.

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570

Aging Is Inevitable – Premature "Damage" Is Not

Steroid-Nutritional Therapy Helps Maintain Health and Vigor in the "Second Forty Years"

The patient who complains of "just getting old" need not be abandoned to a nonproductive life of discomfort. Positive therapy may arrest, or even reverse, the premature damage of gonadal decline and nutritional inadequacy in the growing population of older patients.

Complaints of such symptoms as muscular pain, fatigue, irritability, and poor appetite in the patient over 40 may be the first indications of three major stress factors in the aging process: gonadal hormonal imbalance, nutritional inadequacy, and emotional instability. Institution of adequate measures reduces immeasurably the likelihood of premature disability, chronic illness, and uselessness in later years.¹

"Mediatric" is specifically formulated to guard against premature damage and breakdown of body reserves; to re-establish homeostasis in declining cells, thus delaying the degenerative process; and to raise the level of health by restoring physiologic efficiency.

"Mediatric" provides estrogen and androgen in small doses, nutritional supplements, and a mild antidepressant to promote continuing health and vigor. Recommended dosages: Male — 1 tablet or 1 capsule (or 3 teaspoonfuls) daily, or as required. Female — 1 tablet or 1 capsule (or 3 teaspoonfuls) daily, or as required, taken in 21 day courses with a rest period of one week between courses.

Bibliography on request.

"MEDIATRIC" . Tablets and Capsules

Each tablet or capsule contains:

Conjugated estrogens	. 6	ec)	U	31	nı	6				
("Premarin")	. 0	0 1			10		 	0	0.25	mg.
Methyltestosterone .				0		0	 		2.5	mg.
Vitamin C (ascorbie	20	4.	47						50.0	200.00

Vitamin C (ascorbic acid)...... 50.0 mg. Thiamine mononitrate (B₁)..... 5.0 mg. Vitamin B₁₂ with intrinsic factor

 concentrate
 1/6 U.S.P. Unit

 Folic acid U.S.P.
 0.33 mg.

 Ferrous sulfate exsic
 60.0 mg.

"MEDIATRIC" Liquid

Each 15 cc. (3 teaspoonfuls) contains:

1,000.

 Conjugated estrogens equine
 ("Premarin" ⊕)
 0.25 mg.

 Methyltestosterone
 2.5 mg.

 Thiamine HCI (B₁)
 5.0 mg.

 Vitamin B₁₂
 1.5 mcg.

Folic acid U.S.P. 0.53 mg. d.Desoxyephedrine HC1 1.0 mg.

contains 15% alcohol No. 910-bottles of 16 fluidounces and 1 gallon.

AYERST LABORATORIES

New York, N. Y. • Montreal, Canada &

hypnosis or sedation with increased safety

Medomin'

Unique in chemical configuration, Medomin (heptabarbital Geigy) is metabolized more completely than conventional barbiturates, thus avoiding the danger of cumulation in fatty tissue.

Dosage: Hypnotic, 200-400 mg., sedative, 50-100 mg. two or three times daily.

Scored tablets of 50 mg. (pink), and 200 mg. (white). Literature and samples available on request.



Geigy



Who Is This Doctor?

He was born February 15, 1829, the son of a physician and the grandson of a physician. Yet when he himself suggested the study of medicine his father objected that he had no appreciation of the life, having brains but no industry. His study, research and industry were to prove his father wrong and make him known as an outstanding American physician, author and pioneer in the application of psychology to medicine. His most recent biographer, Ernest Earnest, suggests that "he took psychiatry out of the madhouse and brought it into everyday life."

He took his degree at Jefferson Medical College in 1850, and for the rest of his life he combined medical practice with research. He wrote on clinical medicine, comparative physiology, and toxology, achieving special fame for his treatment of nervous disorders and studies of the nervous system.

His famous rest treatment is recorded in Fat and Blood (1877). His work Injuries to the Nerves and Their Consequences was published as early as 1864, while his last medical book, The Medical Department in the Civil War, appeared shortly before his death on January 4, 1914.

He was for years a trustee of the University of Pennsylvania, president of the Association of American Physicians, of the American Neurological Association, and of the College of Physicians, Philadelphia. Of his novels, all of which have an intellectual quality unusual in his day, the best known are Hugh Wynne, The Adventures of Francois, Dr. North and His Friends, Constance Trescott, and The Red City.

His friend, Walt Whitman, of Leaves of Grass fame, summed him up as well as anyone ever has: "He is my friend—has proved it in divers ways: is not quite as easy going as our crowd—has a social position to maintain yet I don't know but he's as near right in most things as most people. I can't say that he's a world-author—he don't hit me for that size—but he's a world-doctor for me—leastwise everybody says so and I join in."

Can you name this doctor without turning to page 208a?



morning joint stiffness...

PERSISTIN*

Night-long salicylate therapy with a single dose of Persistin at bed-time helps prevent "joint jelling" in arthritic patients.

Each Persistin tablet contains acetylsalicylic acid $2\frac{1}{2}$ gr. (160 mg.) and salicylsalicylic acid $7\frac{1}{2}$ gr. (480 mg.). The latter ingredient is slowly absorbed and eliminated for prolonged salicylate action up to 8 hours.

Complete dosage information in PDR . . . bottles of 90 tablets

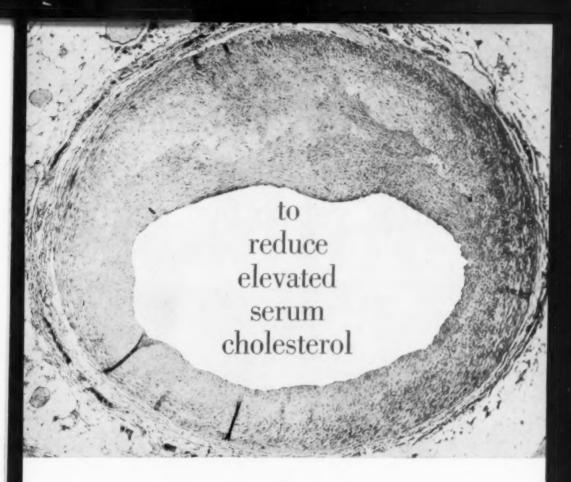


Samples and literature on request

Sherman Laboratories

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Detroit 11, Michigan



two factors

recommended as aids in the management and prevention of atherosclerosis in

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LINOD

- Linoleic acid-essential unsaturated fatty acid-to help restore and maintain the proper ratio between saturated and unsaturated fat in the diet.
- Pyridoxine-essential for the utilization of linoleic acid in the body.

Significant reduction of elevated serum cholesterol has been obtained with Linodoxine in clinically well patients and in those with diagnosed coronary disease.1

- Supplied: Pleasantly orange-flavored LINODOXINE EMULSION, bottles of 1 pint; LINODOXINE CAPSULES, bottles of 100.
- 1. Van Game, J. J., and Miller, R. F.: Current Concepts on the Etiology and Management of Atherosclerosis, Scientific Exhibit, American Medical Association Meeting, New York, June 3-5, 1957. *Trademark

Peizer Laboratories Pfizer Division, Chas. Pfizer & Co., Inc. Brooklyn 6, N. Y.

Here's why no other kind of laxative is gentler, yet so fast acting

SAL HEPATICA® is gentle

It creates a gentle moist bulk, drawing water into the intestine by osmotic action, thus exerting a soft, gentle pressure initiating the proper intestinal response—the very mechanism which produces normal elimination.

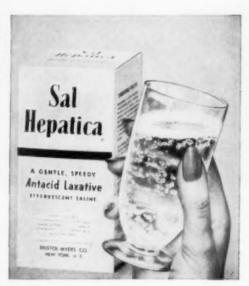
It contains no harsh chemical irritants to stimulate intestinal overactivity—the condition that often causes griping and cramping.

SAL HEPATICA is fast acting

SAL HEPATICA gives prompt relief from constipation. When taken one-half hour before breakfast, your patients will get relief usually within the hour.

Or when taken one-half hour before supper, it will provide relief by bedtime. It will not interfere with work or sleep.

SAL HEPATICA, because it is antacid, helps relieve the hyperacidity which so frequently accompanies constipation—and its antacid action speeds it into the intestine.





SAL HEPATICA has a sound pharmacologic basis.

It is both effervescent and antacid.

"The emptying time of the stomach is actually shortened by reducing the gastric acidity." 1

"Effervescent mixtures decrease the emptying time of the stomach." 2

1. The Physiological Basis of Medical Practice. 1945, p. 486.

2. New England J. Med. 235:80 (July 18) 1946.

MAJOR ADVANCE IN FEMALE HORMONE THERAPY

for certain disorders of menstruation and pregnancy

With NORLUTIN you can now prescribe truly effective *oral* progestational therapy. Small oral doses of this new and distinctive progestogen produce the biologic effects of injected progesterone.

NORLUTIN T.M.

oral progestogen
with
unexcelled potency
and
unsurpassed efficacy

Progestational Effect on Endometrium



Presecretory to secretory endometrium after 5 days' treatment with NORLUTIN.

The x-ray diffraction pattern of NORLUTIN distinguishes its crystal structure from that of other progestogens,

Such as primary and secondary amenorrhea, menstrual irregularity, functional uterine bleeding, infertility, habitual abortion, threatened abortion, premenstrual tension, dysmenorrhea.

PACKAGING, 5-mg. scored tablets (C.T. No. 882), bottles of 30.



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Turn "eat-like-bird" patients into chow hounds with STIMAVITE TASTITABS. Each of the five STIMAVITE factors improves appetite and (in children) promotes growth.

each STIMAVITE TASTITAB contains:

STIMAVITE TASTITABS taste good too: swallowed as a tablet, chewed like candy, or dissolved in liquids. Bottles of 30 and 100. Dosage is usually one or two STIMAVITE TASTITABS daily, with meals.

stimavite the appetite" with

STIMAVITE TASTITABS



LETTERS

THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers who are invited to comment on controversial subjects names will be omitted when requested.

Medical Fratricide

In a recent edition of your medical magazine, there is an article written by Dr. Bernard J. Ficcara, termed "Medical Fratricide," Some of his ideas I agree with most heartily, but with the majority of these I disagree, and for that reason this letter is written.

I will agree to the following points:

- 1. We must stick together.
- We absolutely must not openly condemn each other. The best saying that I have along these lines is "We live in glass houses and therefore shall not cast stones."
- We must settle our differences among ourselves, even if it takes from now until eternity.

However, on the other hand, I disagree most heartily in the following points:

 Our profession has always been marked by progress, and differences in opinion, in my humble opinion, makes for progress, because when

- one disagrees with another he thinks, and in thinking, ideas are born and progress is marked with the birth of ideas.
- 2. The point that I most wish to make, and I am most emphatic in, is that we are a BUSINESS and profession. The public has made us so. Modern offices, modern equipment, modern drugs require money and are expensive, and while a few of us have been born poor and have married poor, we owe not only to ourselves, but to our families, a good means of livelihood for the long and hard hours that we put into the profession.
- We must meet changing conditions medically, financially and in business, and usually these changing conditions mean money out of our pockets, either in the form of equipment or drugs.
- 4. The bulwark of democracy and free enterprise is that of the individual and the first step to prevent socialism is that of free enterprise. I do not believe there is a guild, craft, union or profession which is more individualistic than doctors. Naturally, we will be the first target of those who wish to bring about a socialistic state here in America.
- 5. Despite the fact that I love my country and its form of government, any student of government or governmental affairs will recognize that we are rushing headlong into socialism. We have only to look to our brothers in England to see what socialism has done to the medical profession in that country. Not only has it lowered the standards of medicine, but it has caused the medical profession to be disgruntled as to its working condi-



For—
quick symptomatic relief
or prophylaxis in
urinary tract infections

SUROMATE

patch

THE TRIPLE SULFA

Sulfadiazine . . . 100 mg. Sulfamerazine . . . 100 mg. Sulfacetamide . . . 100 mg. An improved combination including sulfacetamide ... efficient antibacterial of exceptional solubility. Offers wide-spectrum activity with low dosage, minimal danger of crystalluria or sensitization. Preferred to antibiotics because drug resistance or superinfection is less likely.

with the DOUBLE PLUS...

Ext. Hyoscyamus . 5.75 mg.

Potassium Citrate . 200 mg.

Antispasmodic action of hyoscyamus quickly relieves pain, irritation, burning, urgency.⁴

Alkalizing and diuretic effects of potassium citrate enhance sulfonamide solubility and safety.⁴



Supplied: Bottles of 100 tablets.

1. Kerley, L., and Headlee, C. P.: J. Am. Pharm. A. (Scient. Ed.) 45:82, 1956. 2. Lehr. D.: Special Exhibit, Mod. Med. 23:111, No. 2, 1955. 3. Editorial, J.A.M.A. 160:210, 1956. 4. Bastedo, W. A.: Materis Medica, Pharmacology, Therapeutics and Prescription Writing, ed. 4, Philadelphia, W. B. Saunders Company, 1937, pp. 514, 101.

THE E. L. PATCH COMPANY STONEHAM, MASSACHUSETTS WHENEVER COUGH THERAPY IS INDICATED

Hycodan

o coughed:

■ Relieves cough quickly and thoroughly ■ Effect lasts six hours and longer, permitting a comfortable night's sleep ■ Controls useless cough without impairing expectoration ■ rarely causes constipation ■ And pleasant to take

Syrup and oral tablets. Each teaspoonful or tablet of HYCODAM® contains 5 mg. dihydrocodeinone bitartrate and 1.5 mg. Mesopin.† Average adult dose: One teaspoonful or tablet after meals and at bedtime. May be habit-forming. Available on your prescription.

Endo

ENDO LABORATORIES Richmond Hill 18, New York

BRAND OF HOMATROPINE METHYLBROMIDE



just two tablets at bedtime

for gratifying
rauwolfia response
virtually free from side actions
Rauwiloid®



Joyfully anticipating

Natalins-PF°

prenatal phosphorus-free vitamin-mineral capsules, Mead Johnson generous calcium ... no phosphorus

For the modern, pregnant woman, just 1 to 3 small, easy-to-swallow capsules daily—according to her individual need—provide generous amounts of iron, calcium and vitamins to help her meet the stress of pregnancy.

For some patients, you may prefer to prescribe Natalins, which contain both calcium and phosphorus.

MEAD JOHNSON

SYMBOL OF BERVICE IN MEDICIN

BAPAST

INTRAVENOUS Compatible with common IV fluids. Stable for 24 hours in solution at room temperature. Average IV dose is 500 mg. given at 12 hour intervals. Vials of 100 mg., 250 mg., 500 mg.



THERAPEUTIC BLOOD LEVELS ACHIEVED

Many physicians advantageously use the parenteral forms of ACHROMYCIN in establishing immediate, effective antibiotic concentrations. With ACHROMYCIN you can expect prompt

INTRAMUSCULAR Used to start a patient on his regimen immediately, or for patients unable to take oral medication. Convenient, easy-to-use, ideally suited for administration in office or patient's home. Supplied in single dose vials of 100 mg., (no refrigeration required).



IN MINUTES -- SUSTAINED FOR HOURS

control, with minimal side effects, over a wide variety of infections reasons why ACHROMYCIN is one of today's foremost antibiotics.

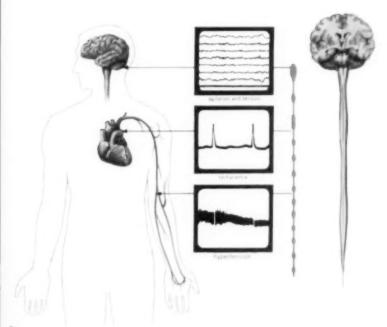
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tions, fees, and a whole host of other ills and ailments. Also, this disgruntlement has been slowly seeping into and gathering force among the patients, in that there is a growing tendency among the patients to seek free basis medical advice from a few stalwart doctors in Britain. I am still a firm believer in States Rights. One can recognize this country is built on States Rights from the name of the country, "The United States of America." However, it appears to me that the Federal Government has been usurping more and more powers until sooner or later it will be simply "America," not "The United States." if this thinly disguised threat is not combatted at once.

- 6. We may think what we may, but we still are only important to the public if and when they need us, and in this respect we are no different from any other craft, plumbers, electricians and carpenters included. Believe what we may, but people come to us only when they need to do so, even if this is for an annual checkup. which each person should have. I myself would be the first to discourage my patients calling upon me socially during office hours. People come to me because they have problems, real, imaginary, physically, mentally, socially or psychically and if it is within my power to solve these problems, I will, but again that problem must be of an acute nature to the patient before he will seek my advice.
- 7. The big difference among doctors comes from the difference in education, training and services rendered. As a general practitioner I would no more attempt to diagnose a brain tumor than to attempt to fly to the moon. However, after a complete physical examination, in which not only the neurological aspects were considered, I have the right to render an opinion to that patient and recommend that he see a neurological surgeon for further work-up and study, and while I have not rendered too much service to the patient, yet a great deal of my time and effort has been expended upon this patient, taking the body as a whole and not that of the brain of tumorous area alone. For this I deserve a rightful fee, can and will demand it, and will collect this fee.
- The fees that are due us are in a large part consumed by office expenses and rendering unto Caesar that which is Caesar's, namely, income tax. One would be very foolish to think that any government of any degree of efficiency and goodness can function without money. However, again render unto Caesar what is Caesar's, and I pay my income tax with the usual amount of griping that is typical of the usual and average citizen. My only hope is that for each dollar paid I will receive at least 99c worth of efficient government, and not spending this or throwing it away on foolish adventures. In other words, in my own case, out of each

control through sympathetic regulation*



When stress disturbs autonomic balance—by eliciting increased activity of the sympathetic nervous system—hypertension, tachycardia, agitation and many other symptoms you see in everyday practice may result. On the following pages you will see how Serpasil, through its unique ability to regulate sympathetic function, controls these symptoms...

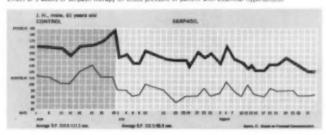
through sympathetic regulation

...Serpasil* controls high blood pressure

Stress situations produce stimuli which pass through the sympathetic nerves, constricting blood vessels and increasing heart rate. Hyperactivity of the sympathetic nervous system may elevate blood pressure; if prolonged, this may produce frank hypertension. By blocking the flow of excessive stimuli to the sympathetic nervous system, Serpasil guards against stress-induced vaso-constriction, brings blood pressure down slowly and safely.



Effect of 9 weeks of Serpasii therapy on blood pressure of patient with essential hypertension

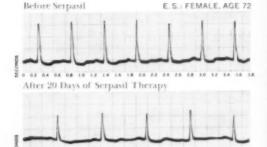


In mild to moderate hypertension, "Serpasil alone is effective in about 70 percent of cases...and is free of virtually any serious side effects."

In severe hypertension, where organic as well as functional changes are implicated, Serpasil is valuable as a *primer*. By adjusting the patient to the physiologic setting of lower pressure, Serpasil smooths the way for more potent antihypertensives.

In all grades of hypertension, Serpasil may be used as a background agent. By permitting lower dosage of more potent antihypertensives. Serpasil minimizes the incidence and severity of their side effects. through sympathetic regulation

Serpasil controls tachycardia



This ECG study demonstrated the heart-slowing effect of Serpasil in an elderly female. Before Serpasil the heart rate was 110 beats per minute. After 20 days of Serpasil (0.5 mg. b.i.d.), heart rate had fallen to 80 per minute.

Harris, R.: Based on Personal Communication.

When stressful situations continue, unresolved, attendant activation of the sympathetic nervous system may unduly stimulate cardio-accelerator fibers, producing tachycardia.

Serpasil allays stress-induced tachycardia through suppression of sympathetic activity. Cardio-accelerator impulses are inhibited and the normal braking action of the vagus allowed to predominate. As a result, cardiac efficiency is enhanced.

Serpasil has been "found useful in relieving the tachycardia and emotional symptoms associated with cardiac arrhythmias, thyrotoxicosis, neurocirculatory asthenia, and even coronary heart disease."²







Normal untreated monkey: active, hostile

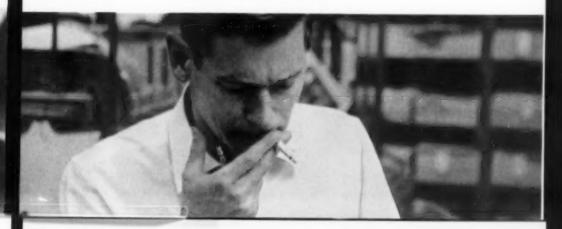


Reserpine treated monkey calm and relaxed

Serpasil* controls agitation and tension

"The emotional life of the individual is determined in a large measure by the functional reactivity and the balance of the autonomic nervous system."3 Serpasil exerts a calming effect by suppressing sympathetic overactivity in autonomic centers. It benefits patients whose degree and type of emotional disturbance cannot be adequately controlled by sedatives or tranquilizers which have no autonomic effects. Serpasil is especially suited for the treatment of emotional disorders marked by frank somatic symptoms, such as hypertension and tachycardia-although it does not significantly affect blood pressure in normotensive patients.

NOTE: Serpasil is not recommended as a palliative for the ordinary worries and cares that are normal to—and perhaps necessary to—the healthy human organism. It is recommended for the patient who suffers from intolerable anxiety and tension that impair his day-to-day functioning.



100 1 1

0. 01 .

through sympathetic regulation

Serpasil controls other disorders seen in everyday practice:

premensifical tension. Serpasil exerts a calming effect in women who become irritable, easily fatigued and apprehensive as the menstrual period approaches; it controls the "cyclic" change in personality.

MENOPAUSAL SYNDROME: Serpasil may be of value in averting hot flashes, headache and other vasomotor disturbances stemming from changes in autonomic function that occur during the female climacteric.

ALCOHOLISM: Serpasil acts as an "emotional gyroscope," helps the alcoholic "stay on the wagon," makes him more amenable to counseling. Parenteral Serpasil generally controls delirium tremens within 24 hours.



one of the safest, least toxic, and most effective agents in everyday practice

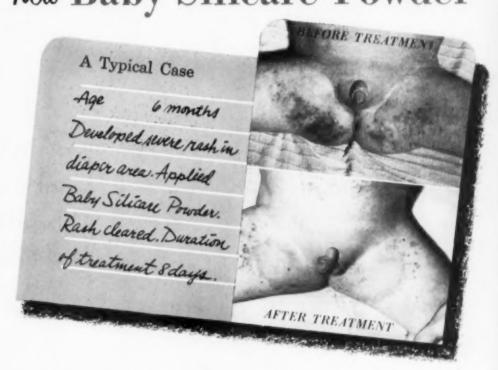
AVERAGE DAILY DOSE: Initial—Two 0.25-mg. tablets. Maintenance—After a week or more reduce to 0.1 to 0.25 mg. per day.

SUPPLIED: Tablets, 0.1 mg., 0.25 mg., 1 mg., 2 mg. and 4 mg. Elinibs, 0.2 mg. and 1 mg. per 4-ml. teaspoon. Parenteral Solution: Ampuls, 2 ml., 2.5 mg. Serpasil per ml.; Multiple-dose Vials, 10 ml., 2.5 mg. Serpasil per ml.

CIBA

I. Coan, J. P., McAlpine, J. C., and Boone, J. A.: J. South Carolina M.A. 51:417 (Dec.) 1955. 2. Halprin, H.: J. M. Soc. New Jersey 32:616 (Dec.) 1955. 3. Kuntz, A.: The Autonomic Nervous System, Lea & Febiger, Philadelphia, 1953, p. 458.

you'll get dramatic results like this with Revious new Baby Silicare Powder

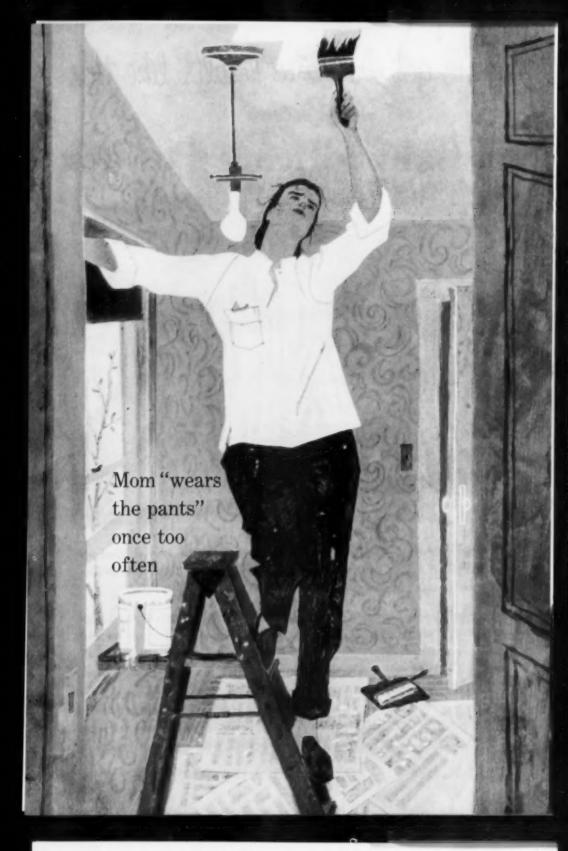


In rigidly controlled tests,* medicated Baby Silicare Powder cleared up every case of diaper rash; when used prophylactically it was effective in the vast majority of cases.

Because it is essentially moisture repellent, mildly keratolytic, and bacteriostatic, infants exposed to ammonia irritation showed complete and rapid recovery. Baby Silicare Powder is a desirable medication for all types of diaper rash; it is also good for protection from prickly heat.

Baby Silicare*Lotion containing the same medicated ingredients as the powder is an effective cleansing and protective agent.

*Kaessler, H. W. Arch. Pod. Feb. 1957 Revion PHARMACAL DIVISION · NEW YORK



frozen shoulder

Bursitis and tenosynovitis are new terms to homemakers, but they are not uncommon sequels to overexertion. Early antirheumatic therapy is to be encouraged in the treatment of these conditions, as it is in more serious rheumatic conditions, to alleviate pain and prevent progression of the disorder. With adequate therapy the prognosis of bursitis in its acute stage is good. Delaying therapy may result in extension of the inflammation and gross anatomical changes that tend to incapacitate the patient.

SIGMAGEN provides doubly protective corticoid-salicylate therapy-a combination of METICORTEN® (prednisone) and acetylsalicylic acid providing additive antirheumatic benefits as well as rapid analgesic effect. These benefits are supported by aluminum hydroxide to counteract excess gastric acidity and by ascorbic acid, the vitamin closely linked to adrenocortical function, to help meet the increased need for this vitamin during stress situations.

protective corticoid-salicylate therapy

SIGMAGEN

for patients who go beyond their physical capacity

Schering

dollar received in the office, about 35 to 40c is rendered unto me, and with this I must provide not only a few bare essentials for myself, but a home, clothes, food and a few other items for a wife and children. Personally I am violently opposed to Social Security for doctors, hoping and wishing to make my own way in life and save up a sufficient amount to carry me on when my days of usefulness are no longer there, and I believe that some form of tax exempt investments is the answer to the question.

So, to say the last word, I am a States Righter, a rugged individualist wishing to make his own way in life, a believer who is solidly behind the present method of medical treatment, I do not condemn my fellow practitioners nor in any way cut their throats, but I do demand of them loyalty, unison in action, and continued medical progress.

W. M. M., M.D.

Baton Rouge, Louisiana

Dear Dr. Ficarra:

I would like to compliment you on the quality of your recent editorials, principally the one on "Medical Fratricide."

For years I have been preaching that none but the medical profession washes its dirty linen in public, but have failed to make much of an impression. Apparently, I have failed to use such powerful and compelling language such as you command.

I was much impressed.

Edwin Matlin, M. D. Mt. Holly Springs, Pennsylvania

when anxiety and tension "erupts" in the G. I. tract...

IN GASTRIC ULCER



PATHIBAMATE*

Menrohamata with PATMU ON® Ladarla

Combines Meprobamate (400 mg.) the most widely prescribed tranquilizer . . . helps control the "emotional overlay" of gastric ulcer — without fear of barbiturate loginess, hangover or habituation . . . with PATHILON (25 mg.) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: I tablet t.i.d. at mealtime, 2 tablets at bedtime.

Supplied: Bottles of 100, 1,000.



*Trademark Suppliand Trademark for Tridheaving Todde Laderle
LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

CLINICAL experience in the treatment of respiratory tract infections with

toleration

acute pharyngitis pneumonia pleurisy otitis media bronchitis sinusitis bronchiectasis tonsillitis influenza bronchopneumonia pansinusitis laryngitis tracheitis ethmoiditis streptococcal pharyngitis nasopharyngitis tracheobronchitis bacterial pneumonia due to resistant pneumococci, staphylococci, or mixed flora viral or nonspecific pneumonia not responsive to other therapy lung abscess follicular tonsillitis pharyngitis caused by resistant staphylococci, Streptococcus viridans, or hemolytic Streptococcus lobar pneumania

of patients with respiratory infections treated with Signemycin†1 patients showed an excellent or good response patients had fair response patients had a poor response and with outstanding safety and patients had

References: 1. Case reports in the Pfizer Medical Department Files from fifty-three clini-cians, and the following pub-lished reports: Shubin, H.: Antibiotic Med. & Clin. Ther-apy 4:174 (March) 1957. Car-ter, C. H., and Maley, M. C.: Antibiotica Annual 1956-1957, New York, Medical Encyclo-pedia, Inc., 1957, p. 51. Win-ton, S. S., and Chesrow, E.; Ibid., p. 55. LaCaille, R. A., and Prigot, A.: Ibid., p. 19. References: 1. Case reports in

Increasing use of Signemycin V and other Signemycin formulations has confirmed the value of this agent in the armamentarium of the physician treating antibioticsusceptible infections, particularly those seen at home or in office where susceptibility testing may not be practicable and where immediate institution of the Pfizer most broadly effective therapy is necessary.

Trademark, oleandomycin tetracycline

viral URI

World leader in antibiotic development and production PFIZER LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

no side effects

now 2

palatable

and effective

antidiarrheals

containing

Carob powder buffers intestinal contents and adsorbs irritant secretions, bacteria, and toxins. Its marked demulcent properties check hyperperistalsis, permitting fluid absorption and rapidly producing formed stools. Carob powder tends to prevent dehydration and loss of electrolytes and the patient can usually be maintained on adequate nutritious diets during treatment.

The high soluble carbohydrate content (mainly fructose) of carob powder provides valuable nutritional support and tends to counteract diarrhea-induced acidosis.

CAROB POWDER

for prompt symptomatic control



PITMAN-MOORE COMPANY

DIVISION OF ALLIED LABORATORIES, IN INDIANAPOLIS 6, INDIANA

Carob powder with streptomycin/neomycin

INTROMYCIN

Carob Powder . . . for prompt relief of diarrhea symptoms

Neomycin/Streptomycin...for the prevention and treatment of bacterial infections

your patients recover more rapidly with INTROMYCIN

because

- formed stools are produced 5 times faster¹
- water loss is better controlled
- electrolytes are replenished
- bacterial pathogens are inhibited

1. Abella, P.U.: J. Pediat, 41:82, 1962.

Available in 75 Gram (2½ oz.) bottles.

Have you taken

INTROMYCIN

taste test?

the



Carob powder without antibiotics

AROBON

Arobon alone controls most nonspecific, uncomplicated diarrheas by physiologic means—without the use of sedatives or narcotics. In infectious diarrheas, it controls the distressing symptoms when used in conjunction with appropriate antibiotic or chemotherapeutic treatment.

Originally introduced as an outstanding antidiarrheal for infants and children, Arobon has proved remarkably efficacious in the treatment of diarrheas of all age groups.

Distributed by Pitman-Moore Company under the trade name AROBON through rights acquired from the trademark owner, the Nestlé Company, Inc.

Available in 5 oz. bottles.



"I want a four pound breast of lamb dissected free from underlaying pectoral fasciae and with all subcutaneous fat removed."

WIDE THERAPEUTIC RANGE

WITH SAFETY. Each patient has wide physiological and emotional tolerances to anticholinergics. Malcotran's wide dosage latitude facilitates regulation of your patient's dosage according to his need, not his tolerance.

Malcotran assures prompt arrest of gastro-intestinal motility — and reduction of gastric secretion.

MALCOTRAN®

for peptic ulcer



PM-71

MALTBIE LABORATORIES DIVISION . WALLACE & TIERNAN INC.

rarely sensitizes

'NEOSPORIN'®

Polymyxin B-Bacitracin-Neomycin

ANTIBIOTIC OINTMENT

proved in clinical practice for dermatologic and ophthalmic infections

- "We have had excellent therapeutic success and an extremely low incidence of sensitization with its use."
- "... extremely valuable in cleaning up residual infection and stimulating granulation in all types of gangrenous ulcers."2
- "Results are generally quick and excellent, especially in primary diseases. In secondarily infected dermatitis, the antibiotic clears the infection, but it obviously does not cure primary conditions such as acne or eczema."

Available sizes: Tubes of 1/2 oz. with applicator tip, 1/4 oz. with ophthalmic tip, and 1 oz.

'NEOSPORIN' ANTIBIOTIC OPHTHALMIC SOLUTION

Polymyxin B-Gramicidin-Neomycin

Bottles of 10 cc. with sterile dropper

References:

- McCarthy, John T., and Nelson, Carl T.: Pediatric Clinics of North America, Philadelphia, W. B. Saunders & Co., August 1956, p. 514.
- 2. Samuels, Saul S.: Angiology 7:532 (Dec.) 1956.
- 3. Panaccio, Victor: Canad. M. A. J. 75:592 (Oct.) 1956.





PREMENSTRUAL TENSION

daily, depending on weight, beginning 5 to 10 days before menstruation, or at the onset of symptoms.

DIAMOX produces immediate improvement of physical and emotional well-being in these patients by prompt control of the edema frequently associated with premenstrual tension.

A versatile, well-tolerated diuretic, DIAMOX is highly effective in the mobilization of edema fluid, and in the prevention of fluid accumulation. A single dose is active for 6 to 12 hours, offering convenient daytime diuresis. Excretion by the kidney is usually complete within 12 hours with no cumulative effects.

SUPPLIED: Scored Tablets of 250 mg. (Also in ampuls of 500 mg. for parenteral use).

DIAMOX SYRUP: 250 mg. per 5 cc. teaspoonful, peach flavor. Bottles of 4 fluid ounces.

nonmercurial diuretic



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY PReg. U.S. Pat. Off. PEARL RIVER. NEW YORK



Mediquiz

These questions are from a civil service examination recently given to candidates for physician appointments in municipal government. Like to see how you would fare? Answers will be found on page 163a.

1. A 35-year-old man has symptoms of intermittent palpitations, anxiety, excess of perspiration. Examination reveals a blood pressure reading of 190/ 100 mm. Hg. and glycosuria. Basal metabolic rate is + 50 percent, cholesterol 265 mg./100 cc., fasting blood sugar 167 mg./100 cc., and an intravenous histamine test produced a rise in blood pressure reading to 260/160 mm. Hg.; whereas, a cold pressor test was negative. Of the following, the best diagnosis is: (A) arteriosclerotic heart disease and diabetes mellitus; (B) pheochromocytoma; (C) hypertensive vascular disease and anxiety state; (D) adrenal cortical carcinoma.

2. A 50-year-old male has had two hours of crushing substernal pain radiating down both arms and through to back; his skin is pale, cold and moist, his blood pressure reading is 90/60 mm. Hg. Electrocardiogram shows Q waves in chest leads "consistent with old infarction." Shortly after admission, pain extended to the left leg, and pulses disappeared in the femoral ar-

teries. Urinanalysis shows 10 red blood cells per high power field. Of the following, the best diagnosis is: (A) dissecting aneurysm; (B) ureteral colic due to stone; (C) myocardial infarction; (D) arterial embolism.

3. A 50-year-old man complains of spongy gums that bleed easily. Complete blood count, blood smear, Rumpel-Leedes test, bleeding time, clotting time and clot retraction time are all within normal limits. Of the following, the next indicated step in evaluating the complaints is: (A) bone marrow biopsy; (B) determination of percent of prothrombin consumption in clotting; (C) referral of patient to a dentist for evaluation; (D) therapeutic trial of "rutin" to try to restore capillary integrity.

4. A man of 25 years has cholelithiasis and cholecystitis; he reports that gallstones have occurred among many of his relatives below the age of 30. The one of the following diseases which would not be suggested by this one dose a day...

lowers blood cholesterol levels announcing...

a new practical and effective method for lowering blood cholesterol levels...

Arcofac

Just one dose a day effectively lowers elevated blood cholesterol . . . while allowing the patient to eat a balanced . . . nutritious . . . and palatable diet

Mixed tocopherols (Vitamin E) 11.5 mg. (sodium benzoate as preservative)

Arcofac is effective in small doses and is reasonable in cost to the patient



A DIVISION OF ARMOUR AND COMPANY KANKAKEE, ILLINOIS



Armour...Cholesterol Lowering...Factor

history is: (A) hypercholesterolemia; (B) Thalassemia (Cooley's anemia); (C) pseudohemophilia; (D) familial hemolytic icterus.

5. In a case of suspected benzol poisoning, the most useful information is likely to be obtained by an examination of the; (A) liver; (B) blood; (C) kidneys; (D) lungs.

6. Of the various types of radiation listed below, the one which has the greatest penetrating power is radiation with (A) gamma rays; (B) alpha rays; (C) ultraviolet rays; (D) beta rays.

7. Of the following combinations of chemical findings, the one most usually found in tetany due to hypoparathyroidism is: (A) low serum calcium, low serum inorganic phosphate, normal serum alkaline phosphatase, (B) low serum calcium, high serum inorganic phosphate, normal serum alkaline phosphatase; (C) low serum calcium, high serum inorganic phosphate, high serum calcium, high serum inorganic phosphate, low serum calcium, high serum inorganic phosphate, low serum alkaline phosphatase.

8. The radioactive iodine tracer test of thyroid function should not be used in the presence of: (A) leukemia; (B) heart failure; (C) uremia; (D) pregnancy.

 The one of the following fractures for which open reduction is rarely indicated is: (A) fracture of the neck of the femur; (B) supracondylar fracture of the humerus; (C) fracture of the olecranon; (D) fracture of the patella.

10. The proper treatment of a comminuted fracture of the head of the radius with displacement is: (A) immobilization in plaster; (B) sling with early motion; (C) excision of the fragments of the head of the radius; (D) immediate aspiration of blood from the elbow joint,

11. Kayser-Fleischer rings are usually associated with: (A) erythema circinatum; (B) quartan malaria; (C) hepatolenticular degeneration; (D) Gaucher's disease.

12. A man, aged 50, complains of passing small amounts of fresh blood per anus after each bowel movement. There are no other complaints, but the feces frequently have streaks of fresh blood on the surface. Of the following, the type of additional examination which is most likely to establish the diagnosis is: (A) barium enema with x-ray examination; (B) proctosigmoidoscopic examination; (C) examination of stool for ova and parasites; (D) Papanicolaou stain and study of exfoliated cells from freshly passed feces.

13. Steatorrhea is an uncommon finding in: (A) non-tropical sprue; (B) pellagra; (C) cystic fibrosis of the pancreas; (D) celiac disease,

14. Trichobezoar usually implies:
(A) granuloma of rectum; (B) intes-Continued on page 84a









for middle-age slowdown

Plestran is indicated as an aid in restoration of vigor in middle-aged or elderly patients who complain of chronic fatigue...reduced vitality...low physical reserve...impaired work capacity... depression... muscular aches and pains... or cold intolerance. Such "signs of aging," far from being due to physiologic disturbances, may often result from endocrine imbalance, especially gonadal and thyroid dysfunction.\footnote{1.4} Plestran provides ethinyl estradiol (0.005 mg.); methyltestosterone (2.5 mg.); and Proloid\footnote{1.4} (\footnote{1.4} \text{ gr.}) -hormones which help to correct endocrine imbalance and often halt or reverse involutional and degenerative changes.\footnote{1.4}

Plestran restores work capacity and a sense of well-being, usually within 7 to 10 days. It improves nitrogen balance, leads to better muscle tone and vigor, enhances mental alertness, *Purified thyroid globulin

helps to correct osteoporosis, senile skin and hair texture changes and relieves muscular pain.

The anabolic and tonic effects of the hormones in Plestran appear to be enhanced by combination so that small dosages are very effective, Combination also overcomes some of the disadvantages of therapy with a single sex hormone, such as virilization, feminization or withdrawal bleeding.⁵

Dosage: Usually one tablet daily; occasional patients may require two tablets daily, depending on clinical response.

Supplied in bottles of 100 and 500.

References: 1. McGavack, T. H.: Geriatrics 5:151 (May-June) 1950. 2. Masters, W. H.: Obst. & Gynec, 8:61 (July) 1956. 3. Kimble, S. T., and Stieglitz, E. J.: Geriatrics 7:20 (Jan.-Feb.) 1952. 4. Kountz, W. B., and Chieffi, M.: Geriatrics 2:344 (Nov.-Dec.) 1947. 5. Birnberg, C. H., and Kurzrok, R.: J. Am. Geriatrics Soc. 3:656 (Sept.) 1955.

PLESTRAN

a metabolic regulator

WARNER-CHILCOTT

100 YEARS OF SERVICE TO THE MEDICAL PROFESSION

to help
the
constipated
toward
their
normal
regularity



PALATABLE

EFFECTIVE

WELL-TOLERATED

H. Beckman: Treatment in General Fractice: W. B. Saunders Co., 1946, p. 478. 2. A. Grollman: Pharmocology and Therapeutics: Lea & Fobiger, 1954, p. 193. 3. W. J. Visek, W. C. Ilu, L. J. Roth: Studies on the Fate of Carbon-14 Jabeled Phenolphthalein. Jour. Pharmacoland Exp. Therapeutics, July 1956; 117:347,

Indicated in cases of occasional constipation, phenolphthalein, the active ingredient of Ex-Lax, acts gently, overnight..."in the morning produces a stool very much like normal"... continues to act as a "mild aperient for several days," lessening need for frequent medication. No "adverse effects, such as tissue irritation, toxic symptoms or interference with the normal physiological functions" were observed by Isotope Research.

Whenever tetracycline therapy is indicated –

Every clinical consideration

Every clinical consideration recommends.....

Every clinical consideration recommends

Tetrex

THE ORIGINAL TETRACYCLINE PHOSPHATE COMPLEX

for faster, more certain control of infection

- A single, pure drug (not a mixture)
- Highest tetracycline blood levels
- Clinically "sodium-free"
- Equally effective, b.i.d. or q.i.d.
- Exceptionally free from adverse reactions
- Dosage forms for every therapeutic need

BRISTOL LABORATORIES INC., SYRACUSE, NEW YORK

Available for your prescription at all leading pharmacles

More evidence' to confirm that elixir

TYLENOL

...quick-acting pediatric antipyretic-analgesic

reduces fever, relieves aches, pains:



Tylenol "produced effective antipyretic and analgesic responses..."

without worry:



"no evidence of side-effects..." even on prolonged use¹

without a tussle:

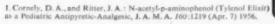


"Tylenol was considered 'acceptable' or 'liked' by ... 86% of the children."



Elixir TYLENOL for little "hot heads"

Bottles of 4 and 12 fl. oz.





tinal parasitic infestation; (C) fecalith in appendix; (D) hair ball in stomach.

15. The spinal fluid sugar is most likely to be reduced in: (A) lymphocytic choriomeningitis; (B) St. Louis encephalitis; (C) general paresis; (D) tuberculosis meningitis.

16. Of the following diseases, the one in which leukopaenia is most characteristic is: (A) kala-azar; (B) leptospirosis; (C) actinomycosis; (D) lobar pneumonia.

17. Of the following diseases, the one due to infection with Rickettsia is: (A) psittacosis; (B) herpes simplex; (C) Q fever; (D) yaws.

18. Of the total time lost from work by employees in the United States due to illness and injury, the percentage due to occupational causes is most nearly: (A) 10%; (B) 35%; (C) 50%; (D) 70%.

Osteitis fibrosa cystica is characteristically associated with; (A) hyperthyroidism; (B) hypoparathyroidism;
 hyperparathyroidism; (D) hyperpituitarism.

20. The one of the following statements in regard to influenza which is the least accurate is that: (A) influenza may be due to one of several virus types and an attack with one type does not produce effective immunity against other types; (B) the transmission of true influenza can be checked by early

administration of suitable antibiotics to the patient; (C) the patient with influenza will not transmit the live infection to others after the first week of infection even though symptoms may persist; (D) the incubation period of influenza is often less than 24 hours and the patient may even infect contacts before manifesting symptoms.

21. A police detective who had been assigned for ten years to the task of developing and photographing fingerprints found increasing difficulty in performing his work because of a tremor of the hands. An investigation revealed that he was suffering from an occupational disease. Among the materials which he handled, the one which was the most likely cause of his symptoms is:

(A) methol; (B) printer's ink; (C) hydroquinone; (D) mercury.

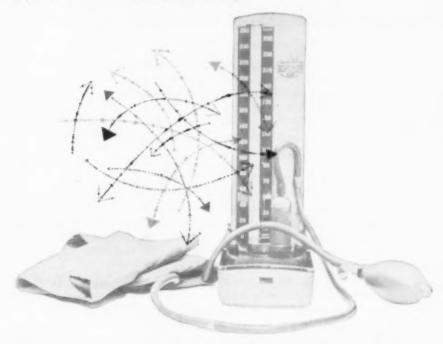
22. The one of the following which is the most important anatomical structure in making it possible to reduce a compression fracture of the body of the first lumbar vertebra by hyperextension is the: (A) posterior longitudinal ligament; (B) interspinous ligament; (C) ligamentum flavum; (D) anterior longitudinal ligament.

23. A "string" sign is seen radiologically in: (A) lymphopathea venereum; (B) terminal ileitis; (C) basal atelectasis of the lung; (D) cardiospasm,

24. The serum protein-bound iodine

-Concluded on page 86a

in hypertension with anxiety



. . . because you want total response
 —somatic and psychic

POSITIVE ANTIHYPERTENSIVE ACTION

in moderately severe, severe, or malignant hypertension

POSITIVE ANTIANXIETY ACTION

in attendant emotional stress, apprehension, tension

ANSOLYSEN

TARTRATE

Pentolinium Tartrate, Wyeth

LOWERS BLOOD PRESSURE

Meprobamate, Wyeth Lic. ender U.S. Pet. No. 2,724,729

RELIEVES TENSION-



Philadelphia 1, Pa

of a patient is found to be 12.0 micrograms per 100 cc. and the urinary excretion of a diagnostic dose of I¹³¹ is 10 percent in 24 hours. The presumptive diagnosis is: (A) euthyroidism; (B) myxedema; (C) carcinoma of the thyroid gland; (D) hyperthyroidism.

25. A 25-year-old man develops a unilateral pleural effusion of clear straw colored fluid of high specific gravity. He complains of easy fatigue; and slight weight loss, a low grade fever and a tender epididymis are the only positive clinical findings in addition to the foregoing. Of the following, the most probable diagnosis is: (A) rheumatic fever; (B) lupus erythematosous; (C) bronchogenic carcinoma with pleural metastases; (D) tuberculosis.

26. A patient who had amebiasis has recurrent severe attacks of diarrhea. The stools are consistently negative for amebae and shigellae. The mucous membrane of the colon is normal, and x-rays of the colon negative. No pus or blood is in the stool. The patient should receive: (A) amebicidal drugs; (B) sulfonamides; (C) both amebicidal and sulfonamide drugs; (D) only symptomatic therapy.

27. An outstanding clinical finding in persons suffering from chronic industrial mercury poisoning is: (A) hematuria; (B) severe anemia; (C) jaundice; (D) tremor of the hands.

28. The most important route of absorption of industrial poisons is: (A)

gastro-intestinal tract; (B) skin; (C) respiratory tract; (D) direct implantation in tissues.

29. Early signs of excessive exposure to x-ray or radium can be best detected by periodic; (A) chest x-rays; (B) urinalysis; (C) liver function tests; (D) blood counts.

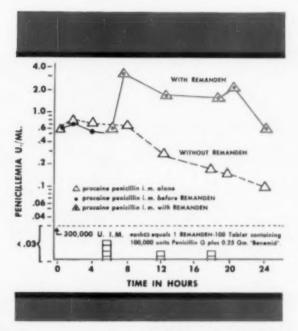
30. The one of the following which is pathogenic for man is (A) Endamoeba coli; (B) Balantidium coli; (C) Eimeria coli; (D) Escherichia coli.

31. The leading cause of loss of time from work among industrial workers is:
(A) occupational diseases; (B) non-occupational diseases; (C) occupational injuries; (D) non-occupational injuries.

32. The effectiveness of BAL (2,3 dimercapto-propanol) in arsenic poison ing is due to the affinity of arsenic for: (A) hemoglobin; (B) sulfhydryl groups; (C) cholesterol; (D) cephalin.

33. Following the inhalation of irritating gas, such as chlorine or phosgene, the physician should watch for the development of: (A) heart failure with peripheral edema; (B) bronchopneumonia; (C) reactivation of old tuberculosis; (D) pneumonoconiosis.

34. The one of the following neoplasms of the chest which commonly gives rise to hemoptysis is: (A) dermoid cyst; (B) chondroma of the bronchus; (C) neurofibroma; (D) bronchial adenoma.



The only oral penicillin that gives results comparable to parenteral penicillin



PENICILLIN WITH BENEMID®

The Benemid in REMANDEN allows recirculation of the penicillin—without interfering with normal renal function. Penicillin concentrations are 2 to 4 times higher with REMANDEN than with other oral penicillin preparations. Comparable, in fact, to those of intramuscular penicillin. REMANDEN can be used by itself or to supplement parenteral therapy. Available in Tablets or Suspension for flexible dosage.



MERCK SHARP & DOHME

NEW TOPICAL DIMENSIONS

in

INCORPORATED IN EXCLUSIVE ACID MANTLE VEHICLE

Antiinflammatory Antipruritic Antiallergic Bactericidal Fungicidal Protozoacidal

action

pH 5.0

Creme

ACID MANTLE® · hydrocortisone · stainless tar · diiodohydroxyquinoline

In subacute and chronic dermatoses, "especially where an inflammatory reaction was accompanied by increased scaling and lichenification with secondary infection such as is seen in seborrheic dermatitis, atopic dermatitis, contact dermatitis, and neurodermatitis."

-Rein, C. R., and Fleischmajer, R.: Personal Communication.



Sig: Apply b. i. d. 1/2 oz., 1 oz., 2 oz., & 4.oz. tubes either 0.5% or 1.0% hydrocortisone.



DOME Chemicals Inc. 105 WEST 64 ST., NEW YORK 23, N.Y.

In Canada: 2765 Bales Rd., Municaul. P.Q.

low back pain

begins to yield in hours

In Parkinsonism

Highly selective action ...
energizing against weakness, fatigue, adynamia
and akinesia . potent
against sialorrhea, diaphoresis, oculogyria and
phoresis, oculogyria and
phoresis and tremor
sens rigidity and tremor
... mildly euphoriant ...
safe ... even in glaucoma.

"...is an orally effective and safe antispasmodic drug. Results are prompt, and gratifying to the patient. The number of office visits...is reduced significantly. The dosage schedule is simple...side actions are minimal..."
"No toxic side actions were noted."

Finch, J. W.: Orphenadrine (Disipel) in Skeletal Muscle Disorders. To be published.

Dosage: 1 tablet (50 mg.) t.l.d. In Parkinsonism when used in combination with other drugs, smaller dosage may suffice.

Disipal

*Trademark of Brocades Stheeman & Pharmacia. U.S. Patent No. 2,567,351. Other patents pending. Riker LOS ANGELL

Brand of Orphenadrine HCI



why Dimetane is the best reason yet for you to reexamine the antihistamine you're now using »Milligram for milligram, DIMETANE potency is unexcelled. DIMETANE has a therapeutic index

unrivaled by any other antihistamine—a relative safety unexceeded by any other antihistamine. DIMETANE, even in very low dosage, has been effective when other antihistamines have failed. Drowsiness, other side effects have been

at the very minimum. »unexcelled antihistaminic action

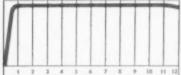
Diagnosis	No. of Patients	Response				Side Effects
		Excellent	Good	Carr	Negative	
Allergic rhinitis and vasa- motor rhinitis	30	14		5	2	Slight Drowsines (3)
Urticaria and angioneurotic odema	2					Dizzy (1)
Altergia dormatitis	2					Slight Drownsest (2)
Bronchial authora			1			
Proritos			1			
Total	37	15	13	7	2	Growsings (3) to 29



EXTENTABS 12 MG., TABLETS 4 MG., CLIXIR 2 MG. PER 5 CC.

a blanket of allergic protection, covering 10-12 hours—with just one Dimetane Extentab »DIMETANE

Extentabs protect patient for 10-12 hours on one tablet. Periods



of stress can be easily handled with supplementary DIMETANE Tablets or Elixir to obtain maximum coverage.

A. H. ROBINS CO., INC.

Richmond, Virginia | Ethical Pharmaceuticals of Merit Since 1878

Dosage:

Adulta-One or two 4-mg.
tabs. or two to four
teaspoonfuls Elizir, three or
four times daily. One
Extental q.8-12h. or twice
daily. Children over 6-One
tab. or two teaspoonfuls
Elizir t.i.d. or q.i.d., or one
Extental q.13h. Children
3-6-1/4 tab. or one
teaspoonful Elizir t.i.d.



MODERN MEDICINALS

These brief résumés of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

Adrestat, Organon, Inc., Orange, New Jersey. Capsules and lozenges each containing 2.5 mg. adrenochromesemicarbazone, 5. mg sodium menadiol diphosphate, 50 mg. purified hesperidin and 100 mg. vitamin C. Indicated for treatment of hemorrhagic disorders, control and prevention of bleeding in surgery and post-surgery. Dose: As directed by physician. Sup: Capsules in boxes of 30 and lozenges in boxes of 20.

Albumisol, Merck Sharp & Dohme, Division of Merck & Co., Inc., Philadelphia, Pennsylvania, Provides nutritive value in addition to a rapid, effective osmotic action in shock, burns, hemorrhage, hypoproteinemia, hepatic cirrhosis, and other conditions such as erythroblastosis fetalis, cerebral edema following anoxia, the hypoproteinemia that accompanies premature birth, and for the treatment of postoperative low plasma albumin levels, edema, and anuria. Dose: Suggested initial dose is 500 cc. (25 Gm. albumin) for adults and for emergency treatment in children. In the treatment of shock due to diminished plasma volume the rate of administration may be as rapid as is desired. In individuals in whom it is undesirable to expand plasma

volume rapidly, a rate of administration of approximately 2 to 4 cc. per minute has been found satisfactory. Sup: In solution, ready to use, 250-cc. bottle and 500-cc, bottle.

Atheroxin, Gray Pharmaceutical Co., Inc., Newton, Massachusetts, Emulsion, each fluid ounce of which contains 15 Gm. Maydol (Gray's brand of refined corn-oil), and 3.33 mg. pyridoxine hydrochloride. Indicated for the prevention and treatment of elevated cholesterol associated with coronary heart disease, hypertension and atherosclerosis. Dose: 2 table-spoonfuls (30 ml) three times per day. Sup: Bottles of 24 fluid ounces.

Pexedrine Spansule, Smith, Kline & French Laboratories, Philadelphia, Pennsylvania. New dosage form 5 mg. Particularly indicated in geriatric and pediatric patients, as well as in patients hypersensitive to Dexedrine. Dose: One spansule in the morning. Sup: Bottles of 30 and 250.

Diamox Syrup, Lederle Laboratories Division, American Cyanamid Co., Pearl River, New York, New product form of Diamox. Peach flavored syrup each 5 cc. teaspoonful of which contains 250 mg. of Diamox. Indicated

-Continued on page 94a

an aura of freshness

The itching and discharge of vaginitis can rob a woman of self-assurance and composure. To restore the feeling of personal cleanliness, Sterisil Vaginal Gel attacks the cause of vaginitis—be it moniliasis, trichomoniasis or Hemophilus vaginalis.*

A new anti-infective compound with broad antibacterial, antifungal and antitrichomonal activity, Sterisil is effective against all three types of vaginitis.¹⁻⁴

Sterisil, with unique affinity for tissue, clings to the site of application providing prolonged antiseptic action. In most cases, the gel need only be applied every other night.

 H, raginalis, the pathogen now believed responsible for most cases of so-called "nonspecific" vaginitis.

Dosage: One application every other night until a total of six has been reached. Treatment should be continued through one menstrual period. Severe cases may require treatment every night.

Available in 1½ oz. tubes with six disposable applicators and complete instructions.

References: I. Wolff, J. R.; In press. 2. Ray, J. L., and Maughan, G. M.; West, J. Surz. #4,381 (Nov.) 1956, 3. Feldman, R. L.; In press. 4. Hoefer, W. H. W.; Bailey, F. A., and Farley, W. W.; Antibiotic Med. & Clin, Therapy 431 (Jan.) 1957. 5. Gardiner, H. L., and Dukes, C. D.; J. Obst. & Gyner, 69:962 (May) 1955.

Sterisil[®]

WARNER-CHILCOTT

TOO YEARS OF SERVICE TO THE MEDICAL PROFESSION

for treatment of edema caused by glaucoma, pre-eclampsia, congestive heart failure and water retention weight gain. Dose: I-II/2 teaspoonfuls per day depending on body weight. Sup: Bottles of 4 oz.

Filibon, Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York, Capsules, containing a combination of vitamins A, D, B₁, B₆, B₂, B₁₂, C, K, niacinamide, folic acid, ferrous fumerate, non-inhibitory intrinsic factor, fluorine, copper, iodine, potassium, manganese, magnesium, molybdenum, zinc and calcium carbonate, Indicated as a supplement to a balanced maternity diet, Dose: I capsule daily. Sup: Filibon jars containing 100 capsules.

Flexilon/H C, McNeil Labs., Inc., Philadelphia, Pennsylvania, Tablets, each containing 125 mgm. Flexin (Zoxazolamine), 300 mgm. Tylenol (Acetaminophen), and 2.5 mgm. hydrocortisone, Indicated for treatment of acute muscular disorders such as arthritis, fibrositis, sprains and contusions where the added hydrocortisone steroid gives faster and more effective relief. Dose: As directed by physician, Sup: Bottles of 36.

Lufa, U. S. Vitamin Corporation, New York, New York. Capsules, each containing 378 mg. unsaturated fatty acids, 2 mg. pyridoxine HCl, 233 mg. choline bitartrate, 110 mg. dl, methionine, 40 mg. inositol, 87 mg. desiccated liver, 1 mcg. vitamin B₁₂ and 3.5 l.U, vitamin E, Indicated to help modify, prevent or correct hypercholesterolemia and atherosclerosis, especially in diabetic, obese or alcoholic patients. Dose: 6 to 9 capsules with meals as directed by physician. Sup: Bottles of 100, 500 and 1000.

Meprolone-5, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pennsylvania. Tablets each containing 400 mg. meprobamate, 5 mg. prednisolone and 200 mg. aluminum hydroxide gel. Indicated for symptomatic treatment of muscle spasm, fibrositis and rheumatic or arthritic disorders. Dose: As directed by physician. Sup: Bottles of 30.

Neo-Synephrine Compound Tablets, Winthrop Laboratories, New York, New York, Tablets, each containing 5 mgm. neo synephrine HCI, 150 mgm. acetaminophen, 7.5 mgm. thenfadil HCI, and 15 mgm. caffeine. Indicated for treatment of the common cold, to relieve nasal congestion, malaise, headache and other aches and pains accompanying cold. Dose: Adults, 2 tablets three times per day. Sup: Bottles of 100.

Norlutin, Parke, Davis & Company, Detroit 32, Michigan. Oral progestational agent for use in amenorrhea, menstrual irregularity, functional uterine bleeding, habitual or threatened abortion, premenstrual tension and dysmenorrhea. Dose: As directed by physician, Sup: Bottles of 30.

Oil Retention Enema, C. B. Fleet Co., Lynchburg, Virginia. Mineral oil U.S.P. (135cc.) contained in hand-size plastic bottle with attached prelubricated rectal tube (non-traumatic). Indicated for post-surgical relief of impacted feces or as directed. Dose: Complete contents of one unit for adults, 1/2 to 1/4 for children or as prescribed by physician. Sup: In single use plastic bottle.

-Concluded on page 98a

POST T&A

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* "PREMARIN" INTRAVENOUS has been used effectively to control spontaneous bleeding, postoperative hemorrhage, and to help minimize blood loss during surgery.

** Only one injection of "PREMARIN" INTRAVENOUS was required for rapid hemostasis in practically all cases of hemorrhage following tonsillectomy or adenoidectomy.^{1.2}

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"PREMARING INTRAVENOUS (conjugated estrogens, equine) is supplied in packages containing one "Secule" providing 20 mg., and one 5 cc. vial sterile diluent with 0.5% phenol U.S.P.

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the physiologic hemostat

1. Mouger H. C.: J.A.M.A. 159:546 (Oct. 8) 1955.

2. Published and unpublished case reports.

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5764

drug-induced constipation... a recurrent problem

"antispasmodics, anticholinergies and hypotensive agents have a definite constipating effect." ¹

> "Constipation... can be a serious drawback to the use of any ganglionic blocking agent."2

Olson³ reports that patients in a controlled study, suffering from drug-induced constipation, were able to continue medication when Veracolate was administered at the same time. His patients "found Veracolate satisfactory therapy at a t.i.d. dosage", and were able to re-establish and maintain regular bowel habits despite the costive influence of other drugs. Patients whose constipation was due to other causes, also responded very favorably to Veracolate, the physiologically-active laxative.

Hootnick, H. L.: J. Am. Geristrics Soc. 4:1021 (Oct.) 1956.
 Moyer, J. H.: GP 15:109 (Feb.) 1957.
 Olson, J. A.: Personal communications.

VERACOLATE°

FOR DRUG-INDUCED CONSTIPATION

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dual action . . .
relieves tension—mental and muscular

notably safe meprobamate Licensed under U.S. Pat. No. 2,724,720

New alternate dose form—WYSEALS* EQUANIL Smooth, yellow tablets: Facilitate swallowing, disguise taste, prevent medication identification. Supplied: 400 mg., bottles of 50.*Trademark



- Perin, Endo Products, Inc., Richmond Hill, New York, New wafer form containing piperazine-calcium edathamil complex equivalent to 500 mg, piperazine hexahydrate. Indicated for treatment of pinworms and roundworms. Dose: As directed by physician. Sup: Bottles of 30.
- Romilar CF, Roche Laboratories, Division of Hoffmann-La Roche Inc., Nutley, New Jersey, Syrup, each teaspoonful (5 cc.) of which contains 15 mg. Romilar Hydrobromide, 1.25 mg. chlorpheniramine maleate, 5 mg. phenylephrine hydrochloride, and 120 mg. N-acetyl-p-aminophenol. Indicated for the symptomatic relief of colds and acute upper respiratory disorders. Dose: Adults and children over 8 years, 1 to 2 teaspoonfuls every four hours. Younger children, 1/4 to I teaspoonful every four hours according to age. Sup: Bottles of 16 ounce and one gallon,
- Suromate, The E. L. Patch Co., Stoneham 80, Massachusetts. A tablet containing sulfadiazine 100 mg., sulfamerazine 100 mg., sulfacetamide 100 mg., extract of hyoscyamus 5.75 mg. and potassium citrate 200 mg. Indicated in the treatment of infections of the urinary tract. Dose: Initial dose 3 tablets; then 2 tablets four times daily with water. Sup: Bottles of 100 and 500.
- Synkayvite, Roche Laboratories, Division of Hoffmann-LaRoche Inc., Nutley, New Jersey. Two new dosage forms ampuls of I mg. and 2.5 mg. of water soluble vitamin K analog. Indicated for treatment of conditions which hinder the absorption of natural vitamin K from the gastrointestinal tract, also for newborn infants for

- prevention of neonatal hemorrhage, or for mothers 2 hours before delivery to forestall hypoprothrombinemia. **Dose:** As directed by physician. **Sup:** Boxes of 12 and 100 ampuls.
- Tetracyn V. Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., Brooklyn 6. New York. Yellow and black capsules, each containing the equivalent of 250 mg. tetracycline hydrochloride and 380 mg. sodium hexametaphosphate. Indicated in the treatment of the wide range of diseases for which tetracycline is used. Dose: As directed by physician. Sup: Bottles of 16 and 100.
- Theruhistin, Ayerst Laboratories, New York, New York. Tablets each containing 4 mg. isothipendyl HCI. Indicated to provide antihistaminic action for alleviation of allergic disturbances without causing drowsiness. Dose: As directed by physician. Sup: Bottles of 100 and 1000.
- Trisogel Liquid, Eli Lilly and Company, Indianapolis, Indiana. Aqueous suspension of aluminum hydroxide and magnesium trisilicate. Indicated for treatment of peptic ulcer and gastric hyperacidity. Dose: As directed by physician. Sup: Bottles of 12 ounces.
- Versenate Sodium, Riker Laboratories, Inc., Los Angeles, California. 5 cc. ampuls, each containing I Gm. solution sodium versenate, Riker, for dilution and intravenous infusions. Indicated for use in emergencies, to reduce calcium levels in hypercalcemia preparatory to surgical procedures, and occurring in such conditions as bony metastatic malignancy, hyperparathyroidism and idiopathic hypercalcemia. Dose: As directed by physician. Sup: 5 cc. ampuls of 20% solution, in boxes of 6.

RESPIRATORY INFECTIONS

GASTROINTESTINAL INFECTIONS
GENITOURINARY INFECTIONS
BACTERIAL INFECTIONS COMPLICATING INFLUENZA

FOR ALL TETRACYCLINE-AMENABLE INFECTIONS, PRESCRIBE PHARMACODYNAMICALLY SUPERIOR

SUMYCIN

SUMPCIN produces higher initial tetracycline blood levels... more immediate tetracycline transport to infection sites... notable freedom from side effects.

Restricted sodium intake not a contraindication. Contains at most 7 mg, sodium per capsule.

SUPPLY	Tetracycline phosphate complex equiv. to tetracycline HCI (mg.)	Packaging
Capsules (per capsule)	250	Bottles of 16 and 100
Suspension (per 5 cc.)	125	2 oz. bottles
Pediatric Drops (per cc20 drops)	100	10 cc. bottles

Minimum adult dose: 250 mg. q.i.d.





Squibb Quality-the Priceless Ingredient

superior tetracycline pharmacodynamic action without monilial reaction

MYSTE

SUMYCIN PLUS MYCOSTATIN

SUMPCIN produces higher initial tetracycline blood levels...more immediate tetracycline transport to infection sites...notable freedom from side effects.

SUPPLY	Tetracycline phosphate complex equiv. to tetracycline HCI (mg.)	Mycostatin (units)	Packaging
Capsules (per capsule)	250	250,000	Bottles of 16 and 100
Half Strength Capsules (per capsule)	125	125,000	Bottles of 16 and 100
Suspension (per 5 cc.)	125	125,000	2 oz. bottles
Pediatric Drops (per cc. –20 drops)	100	100,000	10 cc. bottles

Minimum adult dose: 250 mg. of tetracycline q.i.d.

RESPIRATORY INFECTIONS

GASTROINTESTINAL INFECTIONS
GENITOURINARY INFECTIONS
BACTERIAL INFECTIONS COMPLICATING INFLUENZA

CLIN-V

MYCOSTATIN forestalls antibiotic induced monilial overgrowth and possible complications.

Mysteclin-V is effective whenever tetracycline therapy is indicated and is especially indicated for the following patients who are particularly prone to monifial complications in association with broad spectrum antibiotic therapy.

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- debilitated patients
- elderly patients
- · diabetics

- · infants, especially prematures
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Mycostatin Vaginal Tablets
100,000 units of Mycostatin and 0.93 Gm.
of lactose per tablet. Boxes of 18 with applicator. Boxes of 100 without applicator.

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100,000 units of Mycostatin per Gm. 1/2 ox.
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for victory over monilial infections, depend upon

MYCOSTATIN

effective ... nonstaining ... safe

ORAL MONILIASIS

Mycostatin for Suspension
After reconstitution with 22 cc. of distilled
water, each cc. contains 100,000 units of
Mycostatin. 24 dose bottles with 1 cc.
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500,000 units of Mycostatin per tablet.
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IODIDE THERAPY



without Iodism

Full doses of iodide medication can be continued a year or longer with no apparent danger of iodism, provided you prescribe IODO-NIACIN.

Iodo-Niacin Tablets contain niacinamide hydroiodide 25 mg. with potassium iodide 135 mg. It has been established that niacinamide hydroiodide combats iodism by the same mechanism as that of niacin and niacinamide against pellagra'.

In a series of 59 cases of arteriosclerosis which were treated with Iodo-Niacin Tablets in full dosage over a period of more than a year, there was not a single case of iodism.

In urgent cases Iodo-Niacin Ampuls may be used for intramuscular or slow intravenous injection.



*U.S. PATENT PENDING

The indications for Iodo-Niacin are the same as for potassium iodide; namely, arteriosclerosis, coronary sclerosis, angina pectoris, chronic bronchitis, bronchial asthma, sinusitis, simple colloid goiter, cretinism, hyperthyroidism, thyroid crisis, and preparation for thyroidectomy.

The average adult dosage is 2 tablets three or four times daily after meals, with half a glass of water. For children over six, 1 tablet. This dosage may be continued indefinitely with no apparent risk of iodism.

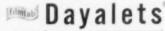
Supplied in bottles of 100 tablets, slosol-coated, pink.

Am. J. Digest. Dis. 22:5, 1955.
 M. Times 84:741, 1956.

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CHEMICAL	Gentlemen: Please send me professional literature and of IODO-NIACIN.	samples
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Nervous Nan needs a vitamin plan

Poor Nan! Up at 7:00 (coffee!) . . . rush like a fiend, work 'til 10:00, then - more coffee . . . and a roll she'll never eat. Her diet, plainly, is a flop. And so is her nutrition. When you correct her harried menu habits, keep potent Filmtab DAYALETS in mind. 10 important vitamins in each tiny Filmtab.



And when you need vitamins with minerals, remember new DAYALETS%-M-10 important vitamins and 9 minerals in each tiny Filmtab. In the "table" bottle.

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Thiamine Mononitrate 5 mg
Riboflavin 5 mg
Nicotinamide 25 mg
Pyridoxine Hydrochloride 2 mg
Vitamin B ₁₂ . 2 meg (as cobalamin concentrate)
Folic Acid
Calcium Pantothenate 5 mg
Ascorbic Acid 100 mg

% Filmtab — Film-sealed tablets, Abbatt; pat. applied for.



Diseases of the Prostate in Office Practice

A mong the genito-urinary conditions which cause the adult male to consult his physician, chronic inflammation of the prostate gland is one of the more common. The anatomical position and composite physiology of the gland would be expected to cause it to be a common offender, actively involved as it is during both urination and sexual activity. Thus, prostatitis, in any of its many guises, makes a sound knowledge of the variation of its disease patterns imperative for the alert general practitioner, since it is he who is usually consulted first by the patient. Inadequate study, incorrect or incomplete diagnosis, or unsound treatment - any of these can inadvertently convert a basically simple case into an annoying and prolonged problem, with exacerbation to an acute phase and unnecessary discomfort, disability, and expense. A consideration of the roles of these several factors may, therefore, be of some

immediate value to those who are in the front line of medical care.

It would be well, at the outset, to emphasize that the participation of the prostate in both genital and urinary functions, and its intimate association with the neighboring seminal vesicles, should—and do—make possible the development of four principal symptom complexes, although none is sharply differentiated in the average case. Thus, one sees urinary symptoms alone, genital symptoms alone, distant and apparently unrelated symptoms alone, or any combination of these. The latter is, of course, the most usual.

In the absence of an obvious cause—such as acute urethritis due to gonor-rheal infection — burning, frequency, and urgency should suggest first the posterior urethra, which is to say, the prostate, since the isolated posterior urethra does not exist in clinical practice as a frequent entity. Too often, one

finds these symptoms ascribed either to urethritis or cystitis. However, the sex is wrong. The female would, with such symptoms, rightly be expected to have an inflamed bladder or urethra. The male, on the contrary, is more likely to be the victim of his inflamed prostate, not of his bladder. Recognition of this fact alone can save time in treatment. since investigation will be directed early to the probable source of the symptoms. The urine of the male patient may be, and often is, quite free of pus cells, and the prostate may be of normal contour, size, and consistence, as judged by palpatation per rectum. Nevertheless, deep within its intricate duct and gland system may be the lurking inflammatory process which has announced its existence. Digital examination, alone, does not, therefore, justify a positive or negative diagnosis of chronic prostatitis. The slide on the microscope stage supplies the answer. It requires but a moment to inspect the smear of the prostatic fluid. A single small drop, examined without a cover glass, will display the presence or absence of pus. No stain need be used.

Testicular discomfort in one or both testicles, a sensation of fullness, or even of mass in the perineum, sudden sharp twinges of discomfort or pain in the rectum, inguinal aching, lumbosacral backache, or even frank lumbar painany or all of these may be traced to prostatitis. Furthermore, premature ejaculation, painful ejaculation, diminished coital sensation, and even some instances of temporary impotence may be due to the inflammatory process. Gross physical findings are often absent, and thus misleading. It is not at all unusual for the urologist to demonstrate the true cause of symptoms to be in the

prostate, which has previously not been indicated, but only because he is more engaged with, and thus conversant with, the stealthy progress of prostatitis. It calls to mind the admonition of one's medical professors that to think of a diagnosis is to make it.

Because of its accessibility, the prostate gland not only is easily examined. but also is easily mistreated. The evil reputation which prostatic examination and massage have among the recipients is, more, often than not, the result of unskilled, careless, or clumsy examination. It is the physical action which causes intolerable pain, rather than the sensitivity of the gland itself. In the presence of severe pain, one can assume that an acute, rather than chronic, process is active, and discontinue physical treatment at once. Whatever position the examiner may prefer for the patient to assume for examination or treatment, the introduction of the finger into the rectum is to be made gently and slowly, thereby reducing the tendency of the patient to resist. Even breaks in the anal mucosa or painful hemorrhoids can be overcome without excessive discomfort if the finger be carefully introduced. Palpation should be no more than a mere touching of the gland. This is sufficient to convey to the examiner an adequate conception of the size, symmetry, consistence and sensitivity of the prostate. Irregularities, nodules, and areas of softening can be readily noted. For the performance of massages, a firm but gentle pressure is ordinarily sufficient. It should be made first at the superior and lateral portions to assure inclusion of the secretion of seminal vesicles in the expressed specimen. In general, chronic inflammatory states the prostate involve simultaneously the vesi-

cles, and their treatment is necessary together with the treatment of the prostate itself. When diagnostic separation must be made, the use of endoscopic instruments is necessary. In that event, specialized technical qualification is needed. For general practice in the office, this is, of course, not required. Each prostatic examination, if made with intent to study the expressed material, should in every instance be preceded by the patient's voiding, in order to remove thereby any confusing urethral cellular content, and so to provide a reasonably uncontaminated specimen for inspection. Few patients will complain if gently and deftly handled, Undue pressure, however, causes many complaints, and often results in the patient's foregoing further, and necessary. treatment because of fear of pain.

One should not be disconcerted by failure to obtain a speciman of prostatic fluid at the first visit, or indeed, at the second. If the routine massage is unproductive, it should not be repeated at the time. Rarely is immediate diagnosis so imperative that the risk of causing an acute exacerbation is justified. Often the major prostatic ducts are occluded by epithethial and inflammatory debris to a degree that no secretion appears at the first massage. Despite this failure of appearance, the patient will report improvement at his next visit. For my own categorical convenience, I have termed this "congestive prostatitis." At a subsequent visit, the specimen will be found to contain pus, usually in large aggregates or clumps. The pattern of arrangement of the pus is important and worth recording. As drainage, initiated by massage, improved, the microscopic view will present fewer and smaller clumps, with more evenly-spaced individual pus cells.

In some cases, little pus is ever found, but a notable excess of lecithin bodies is evident. These tend to decrease in number as drainage becomes progressively more satisfactory. The objective assessment of improvement is provided by the microscopic study. The subjective is told by the patient. Usually, improvement is rapid, and symptoms often subside dramatically, sometimes after only two or three treatments. Nevertheless, the microscope continues to disclose fields with pus cell counts far beyond accepted "normal." At this point, the element of judgment enters, and no rule or individual practice can be stated. It would seem reasonable to conclude that the continued absence of symptoms is more significant than the arithmetical sum of the pus cells on the slide. To term a certain number of cells in a given microscopic field "normal" is to compromise judgment. Frequency and duration of treatment are, therefore, matters for the individual physician to decide according to his own estimate of the case. Furthermore, continued treatment beyond the point of relief may actually initiate renewed reaction. One occasionally sees patients who have been treated for long periods, without complete relief, and who improve at once if all treatment be discontinued. Appreciation of this fact has been often stated in the literature, but bears repetition at this time. It might be worthwhile to remark. at this point, that urethral discharge is often evidence of prostatic disease, rather than urethral. One might recall that "all that glitters is not gold." Confusion of prostatitis with urethritis can result in intense dissatisfaction on the part of both the patient and physician. It is here that the simple procedures of

voiding and of examination of the prostatic smear are of real value in differentiation. A case which has been treated under a presumptive diagnosis of non-specific urethritis, and which has not responded, should be re-examined for possible prostatitis.

As adjuncts to treatment, heat in the form of hot tub baths, temporary prohibition of alcohol, and minimal vehicleriding are advisable. It is not necessary for the bath to exceed five minutes. If one chooses to use antibiotic medication for a brief period, some good and no harm is done. In general, the greater value in administering medication lies in protecting the patient against the development of acute prostatitis, or even of acute epididymitis, as a result of massage. It is usually sufficient to prescribe the medication for not more than seventy-two hours, and then to change to a sulfa derivative. One thereby avoids, in most cases, some of the undesirable effects of the antibiotic medications. Penicillin has not proved to be of much value in the writer's experience. However, it must be understood that the drainage of the gland by its duct system is the basis for relief, and that this cannot be successfully achieved by medication alone. The aim of therapy, therefore, is the establishment of unoccluded prostatic ducts. This requires the proper physical pressure of massage. At times

it will be found that some progress has been achieved, but that relief is incomplete. In such instances, the involved areas of the prostate may be in the periurethral portions of the gland and they may not be affected by massage because of the physical limits of pressure extension. They can often be caused to drain by the passage of an ordinary sound of average size. The frequency of passage again depends upon response. One may combine both treatments-massage and the use of a sound-at one visit. In the absence of improvement after using the general method discussed above, it might be well to consider the possibility of unrecognized contributing factors. These include urethral stricture, prostactic stone, tuberculosis involvement. carcinoma, and intra-urethral or intravesical hypertrophy of the prostate gland. The practitioner can best judge his own ability to accomplish these additional studies.

Finally, the possibility of infestation of the male genital tract by trichomonas vaginalis must not be overlooked. In most instances, prevention of recurrent re-infestation will be followed by subsidence. The widespread and apparently-increasing incidence of this type of disease in the female reflects itself in the increasing frequency of its appearance in the male.

314 Physicians and Surgeons Building

oday, medicine, in its division of physiology, biochemistry, diagnosis, surgery, and medical therapy, is in a constant flux. Whereas in antiquity and in the Middle Ages several hundred years might go by before new discoveries were made and accepted, today we move in decades and sometimes less. In following our desire for improvement we occasionally forget that not every new discovery leads to better therapy. The physician, therefore, is repeatedly confronted with the need to evaluate a kaleidoscopic series of advances. The useful changes in today's therapy are based upon new physiological and biochemical discoveries, new diagnostic tests, new surgical techniques, new therapeutic agents, more carefully controlled clinical studies, and improved statistical interpretation.

During the past two decades the diagnosis and therapy of gallbladder disease have undergone certain changes. Because of the complexity of the problem these changes may not be as dramatic as innovations in other fields; but they do exist, and their utilization will be a satisfaction to the physician and a benefit to the patient.

Aside from improved techniques in cholecystography and more refined liver function tests now available, we may contrast the new and the old concepts and therapeutic methods in the comparisons shown in the chart.

REFRESHER ARTICLE

Biliary Tract Diseases

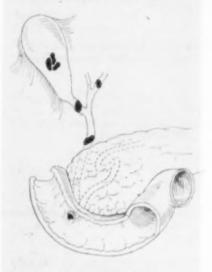


Fig. 1. Common location of gallstones in biliary tract.

This summarization attempts to cover the essential information on the subject, including therapy, and is designed as a time-saving refresher for the busy practitioner.

New and Old Concepts and Therapeutic Methods

THE OLD

Gallbladder disease exists primarily in the "fair, fat and female forty."

Pregnancy predisposes to the formation of gallstones.

Patient should be given a fat-free diet.

Duodenal drainage relieves gallbladder symptoms.

Gallbladder symptoms are always associated with gallbladder pathology.

Surgery is indicated not only in patients with gallstones but in every patient exhibiting symptoms relating to gallbladder disorders.

THE NEW

Gallbladder disease prevails in all age and weight groups and is on the increase. 1.2

No such predisposition is found in recent studies.^{3,4}

Fat-free diets have resulted in malnutrition. Moderate amounts of uncooked fats should be given to improve nutrition and gallbladder function.⁵

Today duodenal drainage is used primarily for diagnostic purposes, to examine biliary constituents, and as an adjuvant in cholecystography.^{6,7}

Symptoms may exist with a normally functioning gallbladder without stones, indicating a psychosomatic involvement.^{1,7}

Results of cholecystectomy in patients with a normally functioning gallbladder (determined by cholecystography) are most disappointing, suggesting the need for careful selection of patients for gallbladder surgery, and elimination of other causes producing "biliary distress." (5.9)

INCIDENCE OF BILIARY TRACT

Many investigators agree that gallbladder disorders represent the most common cause of indigestion today. Their incidence in office practice is very high.¹⁰ With improved diagnostic methods and the constant rise in the number of aged persons, the physician will be confronted with a steadily increasing number of patients suffering from biliary tract disorders. Recent studies suggest that these disorders occur in all age groups. In an investigation of 245 patients who had gallbladder disease it was found that 14.4% were under 30 years of age or less with a mean of 24 years. The mean age of these patients at the onset of cholecystic disease was 18 years, beginning with 15 years. This study also suggests that neither pregnancy nor hemolytic icterus appears to play a large part in the production of gallbladder

disease in adolescence and young adults.2

Routine autopsies show that in each decade past the age of 30, galbladder disease is present in more than one-half of all persons, and gallstones are present in more than one-fifth.¹¹

Gallbladder disease was formerly considered almost nonexistent in Negroes. This belief has now been thoroughly discredited although the incidence of inflammation of the gallbladder is only about one-fifth as great as in whites.¹²

Cholelithiasis varies with age and has been found to be as high as 36,4% in 74 autopsies on patients ranging in age from 75 to 95 years.¹³ In 1,000 routine autopsies it was found that almost half of the patients past 60 had gallstones.¹⁴

A report from the Metropolitan Life Insurance Company indicates that mortality from gallbladder disease has dropped from 7.7 in 1936 to 2.9 in 1955 per 100,000. A long-term follow-up study of insured lives with a history of gallbladder disorders indicates that such persons have a good life expectancy, although mortality is somewhat above the average of persons insured at standard premium rates.¹⁵

ACUTE CHOLECYSTITIS

In all clinical gastroenterology no problem affords the discerning physician more concern and none taxes his diagnostic acumen and clinical judgment more than does acute cholecystitis.¹⁶

Although acute inflammation of the gallbladder is primarily a disease of middle life and old age, occurring more frequently in women than in men, there is hardly an age at which an individual is completely immune; cases have been observed in children aged three and four years. It varies in degree from a mild catarrhal type to an extremely

dangerous phlegmonous or gangrenous type. The course of any given case of acute cholecystitis can hardly be predicted. The condition may begin mildly, and never progress; or it may begin as a fulminating infection rapidly going on to empyema.

Effology The etiology of acute cholecystitis is not fully understood. Some believe that it is nearly always dependent upon an obstruction of the cystic duct.¹⁷ Lymphogenous or hematogenous infections, however, may affect the galbladder irrespective of the presence or absence of gallstones.¹⁸

Contributing factors are metabolic (such as an excessive concentration of cholesterol, as in pregnancy, with precipitation and damage to the mucosa of the gallbladder); and mechanical, such

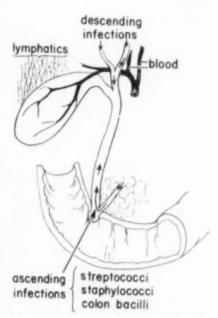


Fig. 2. Pathways of infection causing biliary disturbances.

TYPE	DISTINGUISHING FEATURES	VAN D	EN BE	RGH R	EACTION	
Hemolytic joundice (familial type)	painless course anemia with spherical microcytosis increased fragility of red cells splenomegaly		Bile		Urobilin	
		indirect	stools urine			
			+ +	0	+ .	
Hepatogenous jaundice (taxic and infectious types)	painless course, degree of joundice variable early evidence of hepatic functional disturbance	direct	+	+	+	
Benign biliary obstruction (stone, stricture)	colic or other types of pain (90%) chills, fever progressively increasing hepatic damage	direct	+	+	variable	
Malignant biliary obstruction (carcinoma pancreas, ducts, gallbiadder)	painless course (60%) deep constant jaundice palpable galibladder pruritus, cachexia hepatic damage from hydrohepatosis	direct	0	+	0	

Fig. 3. Differential diagnostic points of various types of jaundice (based on material in Diseases of the Gallbladder and Bile Ducts by Waters and Snell).

as stasis. Following successive attacks, the damage is cumulative and the organ becomes infiltrated, thickened, adherent, and non-functional. It is agreed by the majority of workers today that infection is a secondary phenomenon. Acute disease of the gallbladder due alone to overwhelming infection by bacterial organisms, can and does occur, but such occurrences are comparatively rare. In this respect the pyogenic organisms, such as streptococci and staphylococci, as well as colon bacilli, are most prominent.

Symptoms A mild attack of acute cholecystitis, because of the absence of typical findings, may pass unnoticed under the erroneous diagnosis of a

"stomach-ache" or "bilious attack." The typical moderately severe case of acute cholecystitis is more readily identified. The symptoms are in proportion to the severity of the disease. The condition usually develops with rapidity. Upper abdominal pain, nausea, and vomiting are present. Pain may be mild and dull, and restricted to the upper right quadrant, or it may be severe, and radiate to back and shoulder of the right side. Examination discloses an acutely ill, uncomfortable patient. The abdomen is tender with maximum sensitivity over the gallbladder area. Gentle pressure elicits severe pain. Occasionally, a distended gallbladder may be identified by

careful palpation. The temperature is moderately elevated (101° F) unless the process has become gangrenous, when it may reach 105° F. Jaundice does not usually accompany simple acute chollecystitis, but may result from a calculous obstruction of the common or hepatic bile ducts. The infection may extend into the liver and bile ducts and to the surrounding structures, producing liver dysfunction.

In patients with subclinical or clinical jaundice the Van den Bergh test or the Icterus Index is a useful means of following the course of the disease and selecting the optimal time for operation. Bile is usually present in the urine and can be recognized by means of the yellowish discoloration of the overlying foam that occurs on shaking of the specimen. This is a simple test and can be performed in the home.

The initial appearance of glycosuria during the attack of acute cholecystitis points toward the participation of the pancreas in the inflammatory process. There is a high incidence of associated pancreatic disease which indicates the close relatoniship between pathologic conditions of the biliary tract and diseases of the pancreas.7 Pancreatitis may be induced, at least in some cases, by common duct stones or infection of the gallbladder. In other patients infection may be caused by regurgitation of bile into the pancreas because of an obstruction of the ampulla of Vater due to stone, spasm, tumor, or fibrosis.

These are the chief primary diagnostic objectives: is the condition surgical or not—if yes, is it emergent or elective? If it is elective, then a detailed study for exact localization of the disease should be made. In spite of the classic symptoms there are a number of potential diag-

nostic pitfalls. Unfortunately cholecystography is generally inadvisable and it frequently even fails to achieve visualization; the administration of the gallbladder dye may cause exaggeration of symptoms. Duodenal drainage is also contraindicated because efforts to make the inflamed gallbladder contract may cause considerable discomfort. A common but critical diagnostic error is failure to differentiate between acute gallbladder disease and myocardial infarction. E.K.G. readings and transaminase test may be helpful. Confusion with acute appendicitis is possible, especially if the appendix is located high, or the gallbladder low. The presence of jaundice helps in the differentiation. Amylase tests may be advisable to eliminate the possibility of pancreatitis.

Temperature and leukocyte count are

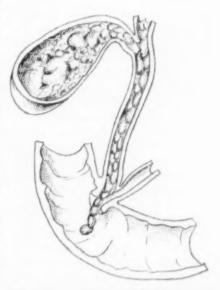


Fig. 4. Foamy exudate caused by inflammation of mucous membrane of gallbladder.

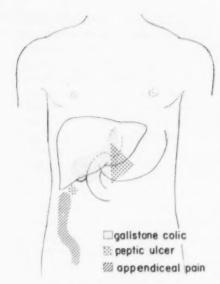


Fig. 5. Areas of tenderness.

fairly reliable indices of infection and should be taken every two or four hours. Elevation of the interior index indicates the extension of the infection to the ducts. The table on the opposite page lists the more important symptoms and signs that may occur.

Treatment The patient is confined to bed. Hospitalization is usually advisable so that all necessary laboratory procedures can be carried out. Liberal fluids are given by mouth, and, in the acutely ill or intolerant patient, by vein. As much as three liters of 10% dextrose solution may be administered intravenously. If the temperature is high, hypodermoclyses of 5% dextrose in saline may be given as well. Hot applications applied over the right upper quadrant are usually appreciated by the patient. Morphine and atropine may be given when the pain is servere.

In the early stage of acute cholecysticis

diet is of vital importance, and a bland fat-free diet is prescribed. If nausea and vomiting are present in acutely ill subjects, high protein feedings or the parenteral administration of amino acid mixtures are now recognized as desirable. These measures are especially helpful in patients with impaired liver function. Intensive fluid administration and proper diet will enable patients to withstand surgery with appreciably lower mortality than in the past.

In the presence of normal liver function and an unobstructed biliary tract, sulfonamides, penicillin, streptomycin, Aureomycin, and Terramycin are excreted in high concentration into the extrahepatic biliary tract. In the presence of an actively obstructed common bile duct or impaired liver function, the drugs are excreted either not at all, or in very small concentrations. In the usual mild case of acute obstructive calculous cholecystitis the clinical course is not affected by the administration of antibiotics or sulfonamides. In the gravely ill patient with acute obstructive cholecystitis, the systemic symptoms are often relieved by the administration of these drugs; the local process appears to be unaffected. Antibiotics should be used in cases of acute cholecystitis with systemic manifestations in order to better prepare patients for surgery.19

The following dosage schedule is suggested—For acutely ill patients who are permitted nothing orally, an initial dose of 500 to 1,000 mg. of tetracycline is administered intravenously for the first 24 hours. At the same time 100 mg. of the drug is administered intramuscularly every four hours, the latter mode of administration being continued until the patient is permitted oral feedings. Administration is then continued with an

Acute Cholecystitis Symptoms and Signs

MILD

Indiaestion.

Moderate pain and tenderness in right upper quadrant. Slight fever.

Malaise.

May pass unnoticed as "bilious attack" or "stomachache."

MODERATELY SEVERE AND

Usually develops with rapidity

Marked upper abdominal pain, right shoulder and scapular pain.

Tender abdomen, with maximum sensitivity over gallbladder area.

Severe pain on application of gentle pressure.

Muscle spasm.

Nausea and vomiting. Sensation of fullness, relieved by emesis.

Temperature elevation, depending upon severity: 101° to 105° F. Possible extension of infection into the liver.

Jaundice: not usual; presence indicates associated cholangitis or obstruction of bile ducts.

Van den Bergh test and Icterus Index: useful to follow course.

Elevated leukocyte count: approximates 11,000 cells per cu. mm. blood; may be in excess of 15,000 cells per cu. mm. in some.

Increased sedimentation rate usual.

Appearance of bile in urine usual (foam test).

Differential Diagnosis: Appearance of glycosuria and elevated amylase during attack points to pancreatic involvement; acute appendicitis; myocardial infarction (causing severe epigastric pain).

Tests contraindicated: Cholecystography and duodenal drainage.

oral dose of 250 mg. every four hours. There may, of course, be variations in this dosage schedule, depending upon the severity of the illness.²⁰

There has been considerable controversy during the past twenty-five years as to when surgical treatment should be undertaken. When and whether to operate depends upon the experience of the surgical staff. While some²¹ state that surgery is often premature and that it may be essential to wait from two to

fourteen days to ascertain the course of the disease before operating, others have had different experiences. In a series of 877 patients with acute cholecystitis, operated in a twenty-three year period from 1932 to 1955, early surgery was resorted to. There were 698 patients with cholecystectomy alone, with a mortality of 1.4%.²²

In arriving at a decision whether to operate or not, age is also an important factor, since in older patients gangrene

develops more quickly and often without classic signs. Old or debilitated patients may have a soft abdomen, little fever or leukocytosis despite even a gangrenous gallbladder. Since acute cholecystitis generally precedes chronic cholecystitis and cholelithiasis, some hold it desirable to perform cholecystectomy in any case after the acute episode has ended. There is general agreement on the policies of pre-operative medical management which require careful watching of the patient. adequate diet, restoration of fluid and electrolyte balance, and the use of antibiotics to combat possible systemic infection.

CHRONIC CHOLECYSTITIS

Chronic inflammation of the gallbladder is one of the most common causes of upper gastric distress after the age of forty.²³ However, in a study of 240 patients with cholecystic disease, it was found that 14.4% were thirty years of age or less.² Chronic cholecystitis often follows acute cholecystitis and is frequently associated with cholelithiasis and impaired liver function.²⁴ It may be treated medically or surgically, depending upon the progress of the disease and the age of the patient.

Etiology Evaluation of the etiologic factors is complex, involving as it may, chemical, physiologic, anatomic, infectious and psychic elements. These may produce thickening of the gallbladder wall, fibrotic processes extending beyond the completely or partially denuded mucosa and involving the entire wall, 25 or simple digestive disorders.

Diagnosis Symptoms and signs of the calculous and non-calculous variety differ merely in degree and not in kind. The table lists the major phenomena that may occur.

Relationship of Coronary Artery Disease and Gallbladder Disease

The differentiation between the pain of cholecystitis and that of coronary artery disease is of great importance. The two conditions occur frequently together and each is able to aggravate the other.26 A helpful point in the distinction between the two conditions is the fact that the pain of cholecystitis is not related to effort, as is usually true of agina pectoris. Moreover, in heart disease local tenderness is not elicited on abdominal palpation. Electrocardiographic tracings may be useful in clarifying the question. They are, however, not conclusive, since an abnormal tracing may be observed in cholecystitis.9

Laboratory Findings Icteric index may be elevated.

Cholecystography is essential, indicating stones or non-functioning gallbladder; non-visualization may suggest calculous cystic duct obstruction, to be confirmed by absence of concentrated gallbladder bile through duodenal drainage.⁷

Duodenal drainage to determine whether contractility of gallbladder is diminished or delayed. Microscopic study of bile may reveal either cholesterol or calcium crystals, indicating stones or leukocytes, indicating infection.

Treatment of chronic cholecystitis may be medical or surgical. Surgery usually provides benefit in patients whose cholecystitis is associated with cholelithiasis. It is wise to do surgery while the patient is otherwise well, i.e., before complications set in. Removal of the gallbladder is also indicated if total loss of gallbladder function is demonstrated and is accompanied by definite, severe, and persistent symptoms; if

Chronic Cholecystitis Symptoms and Signs

Distress, gnawing, and burning in the epigastrium after meals.

Heartburn and vague upper abdominal distress.

Diminished capacity of the stomach (usually due to pyloric spasm).

Belching.

Eructations during and after eating.

Intolerance to fats.

Severe epigastric pain with tenderness over gallbladder in response to greasy foods. Hunger appearing two or three hours after eating. Upper abdominal pain or discomfort.

Constipation.

Jaundice, not usually present; indicates obstruction of common or hepatic bile duct.

Physical examination is of little significance.

Gallbladder may be palpated if abdominal wall is thin.

Deep pressure or percussion over right hypochondrium produces pain.

jaundice is present or the patient gives a history of jaundice; or if pathologic changes in the liver or pancreas are suspected.⁹

On the other hand, poor functioning of the gallbladder may arise from a disturbance of the sphincter mechanism, and from functional derangements in other portions of the biliary tract which are not distinguishable from those of cholecystitis before surgery. In these patients results of surgery are poor and are frequently followed by persistence of symptoms.²⁷

Medical management of chronic cholecystitis consists of two avenues of attack: dietary control, and medication with appropriate drugs.

Dietary control There is no complete agreement on the diet to be used, but most investigators concede that the diet should be adjusted to the particular needs and comfort of the patient. Unless the patient is obese, the caloric intake should be sufficient for maintaining weight; it should be high in protein and carbohydrates and low in fat. It should not be fat-free, because this leads to biliary stasis. The following suggestions to the patient should be helpful:

- 1. Do not eat when tired,
- 2. Eat small meals.
- Avoid severe hunger by eating small amounts between meals.
- Make the evening meal the smallest of the day.
- 5. Do not eat before going to bed. Generally speaking, diets for gallbladder disease should be bland? and foods which cause distress to most biliary patients should be avoided, such as chocolate, nuts, raw fruits, cabbage, onions, coffee, alcohol, carbonated drinks, and "rich" concoctions.28

In order to promote emptying of the gallbladder of patients in the atonic gallbladder group, diets should contain a moderate amount of uncooked fats (butter, cream, olive oil). Eggs may be part of the diet, because egg yolk produces a welcome cholekinetic effect as well as relaxation of the sphicter of Oddi. Fried foods, however, should be avoided completely. Between meals, and at bedtime, one glass of milk, one teaspoonful of powdered gelatin mixed with water or the milk, and crackers or bread with butter or suggested.⁵

Medication The medical treatment of chronic cholecystitis is designed to overcome stasis by promoting biliary drainage. This can be accomplished by dietary measures or cholagogue drugs (such as mineral salts), by the use of antispasmodics to relieve spastic conditions of the bile ducts and sphincter of Oddi, or by the administration of choleretic and hydrocholeretic agents to increase the secretion of bile by the hepatic cells, or by a combination of all four measures. Patient response to either one or all forms of therapy is the most important criterion of effectiveness, and therapy may have to be varied to meet each patient's requirements.

Mineral salts, long recognized as the active ingredients in the popular spa therapies of Europe, produce a cholagogue action with relaxation of the duodenal musculature. They are also laxative. They may be prescribed two or three times each week before breakfast as follows:²⁷

Magnesium sulfate 5 to 7 grams Effervescent sodium

phosphate 5 to 7 grams

Among the antispasmodics atropine sulfate and belladonna extract or alkaloids still hold a prominent position. Tincture of belladonna has the advantage of easy regulation in dosage. The initial dose is about 20 drops taken three times daily.⁷ Combination of antispasmodics or anticholinergics with sedatives (phenobarbital) and tranquilizers (meprobamate) are also effective in many cases. There is a large number of products available in these combinations. The mast important ones are:

Banthine, Searle Barbidonna, Van Pelt & Brown Belladenal, Sandoz Butibel, McNeil Centrine, Bristol Dactil, Lakeside Donnatal, Robins Milpath, Wallace Monodral-Mebaral, Winthrop Nembu-Donna, Abbott Pamine, Upjohn Pathibamate, Lederle Pathilon, Lederle Pavatrine, Searle Prantal, Schering Tral. Abbott Trasentine, Ciba Valoctin, Bilhuber-Knoll

Dosage with these compounds may vary with each product. As a rule one tablet or capsule three or four times daily is adequate, but the dosage should be adjusted to the response of the patient. The mydriatic effect of most of these preparations makes it advisable to withhold their use in the presence of glaucoma.

Choleretic drugs are available in the form of extract of ox bile U.S.P., iron ox bile salts (Bilron-Lilly) and extract of pig bile (Desicol-Parke, Davis). Whereas the bile salts in ox bile are similar in composition to those contained in human bile, those present in pig bile differ from these in their chemical configuration. A synthetic choleretic is Gallogen (Massengill) containing diethanolamine salt of monocamphoric

Hydrocholeretic Drugs

Cholan-DH, Maltbie	Dehydrocholic acid	250 mg.
Cholan-HMB, Maltbie	Dehydrocholic acid	250 mg.
	Homatropine methylbromide	2.5 mg.
	Phenobarbital	8.0 mg.
Cholan-V, Maltbie	Dehydrocholic acid	250 mg.
	Homatropine methylbromide	5 mg.
Decholin, Ames	Dehydrocholic acid	250 mg.
Decholin w/Belladonna, Ames	Dehydrocholic acid	250 mg.
	Extract Belladonna	10 mg.
Decholin Sodium, Ames	20% solution sodium dehye	frocholate
Ketochol, Searle	Oxidized bile acids	250 mg.
Neocholan, Pitman-Moore	Dehydrocholic acid	265 mg.
	Phenobarbital	8 mg.
	Homatropine methylbromide	1.2 mg.
Nubilic, Hobart Laboratories	Dehydrocholic acid	250 mg.
	Phenobarbital	8 mg.
	Belladonna	8 mg.
Triketol, Endo	Oxidized bile acids	250 mg.

acid ester of p-tolyl methyl carbinol 75 mg. Choleretic agents induce a slight increase in the flow of bile of high viscosity. They are primarily used for replacement therapy when human bile is deficient in bile salts. Their administration will aid in the absorption of fats and fat-soluble vitamins A, D, E, and K. Bile salts may also improve the tonus of the gastrointestinal tract.²⁴ Except for iron bile salts they usually require enteric coating to avoid gastric and intestinal irritation. The dosage of bile

salts may vary from 10 to 30 grains daily, administered with or after meals. Obstructive jaundice is considered a contraindication to their use.

Hydrocholeretic agents will produce an effective drainage of the intra- and extrahepatic bile ducts. Their administration will stimulate the liver cells to produce a free-flowing bile of low viscosity. Increase in bile flow may amount to as much as 100 to 200 per cent. Bile produced by a hydrocholeretic agent can flush even the smaller and more tortuous

biliary radicles and thus aid in the removal of inspissated material to combat infection. The usefulness of such stimulation drainage action is valid from physiological considerations and appears to be confirmed by the extensive clinical experience reported.29 The hydrocholeretic agents primarily employed in therapy are the oxidized unconjugated bile acids, represented by dehydrocholic acid USP. Its sodium salt is of such low toxicity that it is available for intravenous administration. These products have been used extensively in experimental and clinical studies and their action and use are described widely in medical textbooks and the medical literature. 30, 31 Their use is much less trouble than the duodenal drainage procedure.22 The usual dosage of dehydrocholic acid is two tablets of 250 mg. each two or three times daily after meals. Sodium dehydrocholate is available in a 20% solution. One or two grams are administered intravenously whenever a more rapid or intensive hydrocholeretic effect is desired.

For initial treatment of chronic cholecystitis or for postoperative management the so-called three-day biliary flush is suggested.⁵³

Hydrocholeretic agents evailable today and containing adequate amounts of oxidized unconjugated bile acids to effect biliary drainage are shown in the chart on page 1091. Recently, a synthetic hydrocholeretic agent has been made available for therapy. This is Zanchol, Searle (Florantyrone 250 mg.). Hydrocholeretic agents are contraindicated in obstructive jaundice.

Postoperative Care The patient whose gallbladder or common duct stone has been removed may require continued supervision and management for a pe-

Three-Day Biliary Flush

BEFORE BREAKFAST

6 oz. Citrate of Magnesia AFTER BREAKFAST

3 tablets of Decholin/Belladonna

BEFORE LUNCH

3 tblsps. pure cream or olive oil

AFTER LUNCH

3 tablets of Decholin/Belladonna

BEFORE SUPPER

3 tblsps, pure cream or olive oil and 1 nitroglycerin tablet (1/100 gr.) under the tongue AFTER SUPPER

3 tablets of Decholin/Belladonna

AT BEDTIME

3 tablets of Decholin/Belladonna

riod of months until his biliary system has made a complete adjustment to the surgical intervention. Adherence to proper diet and production of biliary drainage with hydrocholeretic agents are recommended by many. 34, 35, 36 Followup examinations should be made at regular intervals. The diet suggested is the same as that recommended for patients with chronic cholecystitis: frequent small meals, containing small amounts of uncooked fats. Fried foods, chocolate, spices, cabbage, and beans should be avoided. 37

Hydrocholeretic therapy is employed as a routine feature of postoperative management in patients with cholecystectomy, cholecystostomy, and other biliary tract procedures. In this regimen, the hydrocholeretic agent increases the bile flow. The bile produced by dehydrocholic acid shows no change in specific gravity, but the viscosity lessens, resulting in a thin, easily flowing bile. 23 In any patient who has had a cholecystectomy and later symptoms suggestive of biliary tract disease, the biliary flush is most helpful in washing out remaining small stones, newly formed stones, or thick, tenacious bile. Continued biliary drainage with Decholin/Belladonna in a dosage of one tablet t.i.d. for a period of two to three months may prove helpful in relieving postoperative symptoms, aiding the digestion, and facilitating elimination.

FUNCTIONAL DISORDERS

Psychic disturbances of either intrinsic or extrinsic origin may be sufficient to upset severely and repeatedly the function and ultimately the structure of the biliary tract.¹⁰ These functional disorders and inflammations are poorly understood, complex in their origin, and often involved with dysfunction or disease in the two communicating structures, the liver and the duodenum.²⁸

Some authorities consider biliary dyskinesia (or dyssynergia) to be a functional disorder. It is not easily recognized and may occur in the initial stages of galbladder disorders. There are two types of dyskinesia: hypotonic and hypertonic. The diagnostic features of the former are deficiency or absence of free hydrochloric acid and the pres-

ence of an enlarged gallbladder which does not empty in response to fat. Hypertonic dyskinesia is most commonly found in individuals having the "peptic ulcer personality." Outstanding symptoms are intermittent pain or colic, frequently associated with heartburn and acid eructations. In the hypertonic-hyperacidity group an irritable, spastic common duct sphincter may be aggravated by a focus outside the biliary tract.40 In general biliary dyskinesia is still a much disputed entity among authorities. Treatment of the hypotonic form consists of weight reduction, diet, and medication which reduce biliary stasis, and dilute hydrochloric acid with meals.14 Others recommend the three-day biliary flush, especially when gallbladder disease has not been confirmed by cholecystography.33

The management of hypertonic reflex dyskinesia includes a bland ulcer diet with intermediate feedings, especially useful if hyperacidity is present. Phenobarbital with tincture of belladonna, atropine, or anticholinergies are given before meals. Administration of antacids between meals and at bedtime may be useful. If attacks cannot be controlled by conservative measures, surgical exploration and sphincterotomy may have to be considered. The removal of a normal gallbladder is to be condemned and may only aggravate the situation.³⁴

Conclusion

In summary it may be said that the treatment of biliary tract disorders is a matter of notable complexity. It requires a great deal of attention to detail and adjustment of therapy to the individual requirements of each patient. Treatment may be either medical or surgical, or both, Gallstones should be removed whenever the patient's age and general condition permit. Definite improvements have been made in recent years in diagnosis and treatment of these disorders, making possible a prognosis of almost complete alleviation of troubling symptoms and appreciable reduction of morbidity.

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Anabolic Therapy in the Aged

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The problems of the aged are diversified as will be seen from this series, but all are based on the ravages of advancing years or the lack of ability to compensate for stress or disease. During the past five years I have been studying the effects of aging and evaluating different treatment regimens. These patients are wondering and groping to make their lives productive and tolerable. This report presents a preliminary evaluation of a new treatment program which has been producing most promising results. The calendar age of this group varies tremendously, but their basic problem is similar.

Wakerlin¹ has stated, "When we learn the basic mechanisms of aging, we may understand why various structures and functions of the human being reach their acme and begin to decline at different times in the life span. Thus aging begins with birth (or possibly conception) in terms of growth, with birth in relation to arterial elasticity, at 10 years of age in terms of acuity of hearing, at 15 years in relation to antibody production, and at 25 years in terms of neuromuscular function. Such

data suggest that aging may be a multicentric phenomenon in man."

No segment of our population is increasing as rapidly as that of the overforty-five age group, commonly termed the "geriatric" population. This is evidenced by the observance of increasing numbers of these "elderly" patients in general practice. Medical advances have helped increase opportunities for longer living to the extent where the prospect of a 100-year lifetime is no longer improbable. Even now, one person in 55,000 lives to be 100 years of age.2 The increasing lifespan is in turn creating increased problems for the elderly citizens and the physicians who must often assume the burden of making the patient's later years useful and productive years.

While the medical problems of the aged are diversified, the aging process itself is essentially one of decreasing physiologic reserves. These decreasing physiologic reserves influence the patient's ability to adapt to the effects of the various stresses which confront him daily. Adaptation to stress is further complicated and modified by diseases.

past and present, and by dietary habits and degree of physical activity. Thus, "The clinical picture of the geriatric patient is, partly at least, the sum total of the stress responses which he has experienced."⁴

This series ranged in age from 30 to 90 with the preponderance above fifty—the breakdown is presented in Chart 1.

The division between male and female is about equal, however, symptoms differ as an example, the female's symptoms frequently are associated with her menopausal condition, whereas the males symptoms usually are a result of hypertension or anxiety neurosis. Chart 2 presents the male and female distribution.

The diseases of this group were multiple with several patients complaining or two to four separate conditions. Chart 3 lists the diseases and their frequency in this series.

Hypertension, coronary artery disease, menopause and anxiety neurosis were the most frequently diagnosed conditions. Most outstanding symptoms of these patients were lack of energy, neurasthenia, and general feeling of insecurity. Their general problems were those typical of today's elder citizens: a feeling of uselessness, restricted incomes, and no place to go to utilize the time they formerly spent working. This latter fact proved particularly bothersome to those patients who had formerly occupied responsible positions, but it also existed to some extent among those who had formerly held less responsible positions. The general pessimistic outlook in large measure accounted for a lack of desire to eat properly. Thus, in order to aid medical therapy, all patients received simple psychotherapy, consisting of assurances of the success of the

CHART 1-AGE GROUPS

30	to	40-10	patients
40	to	50-20	patients
50	to	60- 8	patients
60	to	70-16	patients
70	to	80- 9	patients
80	to	90- 2	patients
		TOTAL	65

CHART 2-SEX

	P	ATIENTS
Female		33
Male		32
	TOTAL	

CHART 3-DISEASES

DISEASES	FREQUENCY IN THIS SERIES
Alcoholism	. 3
Anemia, secondary	
Arteriosclerosis, cerebral	1
Arteriosclerosis, coronary	9
Arteriosclerosis, peripheral vasc	u-
lar (limbs)	3
Arthritis — osteo	. 1
Arthritis — rheumatoid	. 7
Bronchitis	. 3
Cardiac decompensation	. 3
Constipation, chronic atonic	
Climacteric, male	
Diabetes mellitus	
Dormatitis, allergic	
Diverticulum, duodenal	: 1
Gastroenteritis	
Hemiplegia	
Hypertension	. 16
Hyperthyroid	
Impotentia	
Menopeuse	13
Nephritis	
Neurosis, anxiety type	. 15
Obesity	
Oligospermia	. 1
Pleurisy	
Postoperative recovery, cholelithi	0-
sis; thyroidectomy	
Raynauds Syndrome	
Thrombosis; mesenteric	
Underweight	
Xerophthalmia	
	124 TOTAL

therapy being given them and assurances of their value to society in general.

Although the effects of aging on each of the body organs should be considered when discussing the aging syndrome in its entirety, for the purposes of this paper we shall discuss briefly three general physiologic areas in which deficiencies may limit the geriatric patient's response to stress. The first of these is the function of the adrenal glands, the sources of the body's essential anti-stress substance, hydrocortisone. It has been stated5 that a limited hormone output of the adrenals might be one of the causes of decreasing muscular strength and vigor and greater liability to acute infections observed in the aged. In a recent study,6 it was postulated that some disturbance in the secretion of the adrenal cortex is present in conditions of chronic asthenia, commonly observed in aged patients. Recent researches on the role of the adrenals on fatigue and resistance to stress are in harmony with the concept of a general hypofunction of these glands in asthenia. Further, asthenia is one of the major symptoms of adrenal insufficiency. While aged patients can withstand reduced gonadotrophic and thyrotrophic influences, "the demands upon the adrenals do not necessarily decrease with advancing age."5 While it remains the task of further research to delineate specifically the effects of aging on the function of the adrenal glands, the administration of natural adrenal hormone (hydrocortisone) may often be indicated in cases of chronic fatigue and neurasthenia, since the aged body responds well to the administration of this substance.

Secondly, in treating the geriatric patient, we must consider the decreased protein anabolism which follows the climacterium in both males and females. This has often been considered the first of the physiologic deficiencies of aging." Because of the reduction in the amount of anabolic hormonal influences, the aged have a decreased ability to retain and utilize nitrogen for tissue-building and repair, often despite an apparently adequate protein diet. Elderly patients usually exhibit above-normal urinary excretion of nitrogen, calcium and phosphorus. This decreased protein anabolism is often reflected in some degree of osteoporosis, and an impaired sense of well-being. Protein metabolism is altered following an injury of any sort (burns, fractures, surgery). A period of protein catabolism or destruction follows the injury and the more severe the stress, the greater are the intensity and duration of the protein catabolic phase." These factors emphasize the importance of administering a protein-anabolic agent to those geriatric patients whose symptoms indicate its necessity. Of the protein-anabolic agents which are available, methylandrostenediol seems preferable, for it has a maximum protein anabolic effect and a minimal virilizing effect.4 Methylandrostenediol's minimal activity on electrolyte balance makes it preferable to testosterone in the aged individual with heart disease.9 Other investigators have confirmed the useful anabolic action of this compound in clinical use.10,11

The third general consideration in the aging syndrome is that of nutrition. Aging results in a special stress on the nutritional processes of the body. ¹² Many geriatric patients suffer to some degree from dietary inadequacies as a result of poor dentition, religious tenets, or fear of allergic reactions to certain foods. Yet, most geriatric patients will

state that they consume "normal" diets. Thus, it is a good practice to inquire what foods they eat. Some patients do not drink milk because they believe it is fattening or eat fruit because once it produced an allergy, but even with the exclusion of several foods may believe they are consuming a normal, adequate diet. The importance of proper diet for geriatric patients cannot be overemphasized. Nutritional deficiency may often retard the patient's response to and recovery from stressful situations.12,13 Studies 14,15,16,17,18,19 have shown that geriatric patients are often deficient in vitamin B12. This deficiency may be due to a physiologically defective B12absorptive capacity,13,20 deficiency of gastric intrinsic factor necessary for the absorption of vitamin B12, or dietary vitamin B₁₂ deficiency.²⁰ At any rate, it appears that the diet of geriatric patients should be supplemented by oral vitamin B₁₂, preferably administered in combination with intrinsic factor concentrate to enhance its absorption.21 Often there is no desire to eat, thus a loss in weight and a hopeless fatalistic outlook of pessimism as to their future "beyond recall." The obese patient seeks solace and refuge in his obesity brought on by the temporary ecstacy of overeating. To make this adjustment these patients need positive reassurance relief of symptoms will be obtained and positive assurance they will be able to live a useful and happy existence.

Recently, a preparation* was made available to me which incorporates ingredients indicated for use in each of the three general areas of geriatric physiologic deficiencies discussed above.

This product is available as oral tablets, each tablet containing 1 mg. of hydrocortisone. This amount of hydrocortisone is considered sufficient to supplement the daily output from the patient's own adrenals, and is not considered large enough to cause any adrenal suppression, particularly on short-term therapy. In addition, each tablet provides 10 mg. of methylandrostenediol for its protein anabolic action and 1/2 U.S.P. oral unit of vitamin B₁₂ with Intrinsic Factor Concentrate to ensure absorption of vitamin B₁₂. In injectable form, the adrenal and anabolic hormones are provided in combination with 20 meg. of vitamin B₁₂.

Each of the 65 patients was given a complete physical examination followed by an explanation of his particular condition. As stated, the establishment of good rapport with each patient was deemed essential to successful therapy. Steps were taken to alleviate any underlying organic causes for the symptoms. Since all patients in this series suffered to some extent from dietary inadequacies, a diet adequate in protein was prescribed for all. One cc. of a solution of the anabolic agent was administered daily for two days and patients were instructed to take two of the tablets daily for maintenance. Patients were seen at weekly intervals for an injection of 1 cc. and reassurances. The duration of treatment ranged from two to four weeks in this series of patients at the time of this report.

Under this regimen, 85% of the patients in this series experienced good to excellent results. Therapy is continuing in those who have been under treatment for a short period of time. There was a noticeable change in spirit, an increased sense of well-being, and an

^{*} Available as Vistabolic.* Organon Inc.. Orange, N. J.

increased appetite. Patients were noticeably improved in personal appearance and many developed a desire to participate actively in organizations composed of elderly citizens. It was gratifying to receive voluntary comments from many of the patients in this series regarding their new state of well-being.

As a result of the excellent response obtained in this series of patients, it is the feeling of the writer that the anabolic agent should be added to the armamentarium of every physician who is treating geriatric patients. While anabolic therapy does not simplify the problem of treating these patients, it does give the physician an excellent therapeutic tonic with which to help the pessimistic elderly citizen gain a fresher outlook on life. It brought rapid reversal of symptoms which are commonly observed in older people: neurasthenia, insecurity, fatigue, lack of energy. In treating these older patients, the physician should also offer some simple psychotherapy and provide a diet adequate in protein.

Summary

1. A preliminary report on the use of a new preparation in the treatment of 65 geriatric patients is presented.

 General symptoms of these patients were those commonly observed in geriatric patients: neurasthenia, fatigue, insecurity, lack of energy, impaired sense of wellbeing.

3. Through use of the abovedescribed therapy, adequate diet, and simple psychotherapeutic measures, 85% of the patients in this series experienced good to excellent results as judged by a reversal of the presenting symptoms.

4. It is recommended that this therapy be given a trial in all geriatric patients whose symptoms indicate a need for better nutrition and small amounts of adrenal and anabolic hormones.

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Emotional Reactions to Cardiac Illness

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A person in need of medical attention for any reason will have feelings of some sort about his illness and will react in some way to it. These feelings are something that can influence the course of the illness. Sometimes feelings are aroused of a type and degree that require the professional assistance of a psychiatrist. At other times, and more commonly, the feelings that are aroused can be dealt with by those immediately in contact with the patient such as his physician, the nursing staff if hospitalization is involved, and his family. By this it is not meant that everyone has to become a psychiatrist all of a sudden and enter into psychiatric therapy with the patient. However, by being alert to the patient as a human being who is ill, and who quite humanly has many feelings about that illness, one can better determine when those feelings may require specialized help. Also by thinking of the patient not as a disease entity or a symptom, but as a human being with feelings, one will be more alert to the

role those feelings can play, and more alert to the ways the feelings may manifest themselves. Therefore, the ability to help the patient in all ways is increased.

In thinking of emotional reactions to cardiac illness, it is necessary to be quite specific. At the same time it is necessary to be general since there are many variables. These variables are that there are many different cardiac conditions which can occur in persons with very different personality structures who may be anywhere in an age range from infancy to old age. As to reactions it is obvious that not every person will react in the same way even though the type of illness and the age it occurs happen to be the same for two persons. How we react is determined by many

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factors. First and foremost, our past experiences in life from birth on determine much of our reaction to situations. Basically, everyone experiences the same kinds of feelings as fear, anxiety, sadness, anger, and pleasure. How these feelings are reacted to, how we let them affect us, what we do in response to them, how we handle them is what makes each of us different. In other words, even though a basic feeling might be the same from one person to the next, there can be many different manifestations or symptoms based on that particular feeling. This can be seen around us all the time in everyday living. One person may respond to a feeling of anger by sulking, another by smashing things, another by arguing, another by denial which also can be expressed in many different ways. Many factors can enter into what feelings are aroused, such as past experience, nature of illness, age of patient, prognosis, and so on.

In relation to a cardiac condition, anxiety is the feeling most frequently aroused, at times to a degree that the patient is in a constant state of fear. From childhood on the heart is a symbol of love, of life, of warmth. We speak of it as the seat of many emotions. We refer to broken hearts in regard to sadness. The heart is something we can not live without, and life lacking in the love it is symbolic of would be rather unpleasant. It is true we can not live without a liver, but somehow a liver isn't symbolic to us in the same way that a heart is. Hence, when something goes wrong with the heart, anxiety and fear can be very great, and this fear and anxiety may be manifested in many different ways. Being aware of this, and also aware that the patient's reaction to his anxiety in turn can arouse many feelings in those about him, including his physician, is important and necessary in order to be able to help him with those feelings. It may then be a little easier to be understanding, or tolerant, or firm, or insistent, or whatever approach is best indicated for the patient's benefit. Very important then, is to be alert to one's own feelings and reactions to the patient.

To return to specific reactions that may be seen in cardiac patients, overt, direct anxiety, freely expressed, is a reaction frequently seen. It may take the form of constant agitation, fretting, worrying, and multiple questions directed toward seeking reassurance. Fear may be openly expressed. The more this fear or anxiety is reacted to by brushing it aside or attempting to ignore it, the more the patient's anxiety may increase and the more he may push and press those about him until someone does let him know it is recognized what he is feeling. Sometimes it can be helpful, when appropriately done, to let a patient know you are aware that they are concerned, or tense, or anxious, or perhaps scared. Some people feel much better and relieved when they can share this and thus feel less alone in their uncertainty if they know others are aware of what they are feeling.

Intense anxiety and fear can prompt the asking of many questions which may be directed toward the attending physician in an effort to get him to tell him about himself and to get at the "truth" about himself, while at the same time denying anxiety. At times this is hard to cope with, especially when one is very busy. It is a time when it is necessary to be alert to what one is feeling in response to the situation and not allow irritation or frustration enter into the handling of it.

Other reactions that are not uncommon in cardiac conditions may be related to various restrictions imposed on the patient by his illness. More often than not a cardiac problem means physical restrictions, dietary restrictions, and a different way of life. This may be extremely difficult for a patient to tolerate. 'he anxiety aroused may be forced down into what we refer to as the unconscious so that not even the patient is aware of his own anxiety. However, the anxiety will still manifest itself in one or several ways. It may be handled n many ways, one of which can be lenial. An example could be the sucessful businessman in his forties who suddenly has an acute myocardial infarction. Always very active and energetic, he may often have thought of how nice it would be to have nothing to do but to be in bed and read or listen to the radio. However, just let this be forced on him, and the anxiety and concern which are aroused, the uncertainties about the future, the concern over the family, the feelings he may have that he has become a has-been or is of no further use or value to anyone, the many questions and thoughts that can occur when there is a lot of time to think, all of these can lead to a reaction of denial which can be very detrimental to his progress. With a lot of time on his hands such as the man above there is bound to be a lot of thinking occurring in regard to the illness. For example, it is rather frightening in going to sleep to wonder and speculate about such things as if you are going to wake up the next morning. Cardiac patients seem to particularly fear being alone and that something may happen to them

at night while they are asleep. denial already mentioned serves as a defense against the anxiety that is aroused and it is not uncommon that a person may actually seem to convince themselves that nothing is wrong. The example of the man with the myocardial infarction is one where he may refuse to accept the fact he is temporarily incapacitated, and he may refuse to follow the doctor's orders, or if he does so, only partly so. All efforts to get him to cooperate may be resisted. Somehow it seems to him as if he would be giving in if he cooperated, and if he did that, all would be lost - he can not face the fact of his incapacity and has to be above and beyond such an impairment. He will do his best to prove it, mainly proving it to himself rather than to someone else. In the early phase of his illness he may show this denial by exerting himself physically in ways contraindicated, or by refusing to stay in bed, or by resisting or refusing nursing assistance in getting up and moving about. In later recovery stages he may seem to be more concerned about the attitudes of others than concerned over his own health and limitations. Such an example can be something such as insisting on carrying a heavy load of groceries out of the store to the car because others might think it strange if they saw him letting his wife do it. What has actually happened in this man is that, for many individual reasons, he can not face a defect of a physical sort in himself, or he can not adjust to it, He is frightened by it, very frightened, although usually he is not aware of being frightened. He is frightened by the uncertainties his illness implies, and reacts by such a defense mechanism as described.

Other means of handling feelings of anxiety and fear can occur also. One of these may be through the use of alcohol in an effort to escape from and to obtain relief from the anxiety and tension. The person uses this need to relax as an excuse but when the drinking becomes excessive, the problems it causes creates additional tension and anxiety so that a vicious circle is established. Another common reaction may be that of depression, at times to a suicidal degree. Feelings of uselessness, discouragement, hopelessness, all may become overwhelming with the patient showing a marked degree of apathy, withdrawal, tearfulness, sleeplessness, loss of appetite, and at times agitation. He may express his depressive and hopeless thoughts and feelings, but just as often he may not communicate verbally what he feels. Likewise, he may admit to suicidal thoughts but as is often the case with the person seriously considering suicide, he may choose not to let anyone know so that there is less chance of people taking preventive action. Periods of feeling depressed and despondent can be quite frequent and severe in cardiac patients. Fortunately, most patients handle these feelings with some degree of adequacy, but often outside help is

When there is a marked, severe, interference with sleep and appetite, and an inability to enter into good interpersonal relations with apathy and withdrawal prominent, all of these continuing on more than just very briefly, then one needs to watch out and be alert to the possibilities, as well as understanding of the patient and why he may feel this way. Such reactions can often be more difficult to handle because of the patient vigorously denying he is de-

pressed despite obvious symptoms of depression.

Other reactions that may occur include psychotic breaks with the patient escaping into the world of unreality when reality is too much to face. These reactions may assume many different forms. Fortunately, however, they are not a common type of reaction occurring in response to a cardiac illness. When a psychotic break does occur, it does, of course, usually require hospitalization and specific psychiatric treatment.

Other factors that can enter into a patient's behavior that require understanding, but at the same time firmness in handling, are the feelings aroused in association to dependency, helplessness, and the so-called secondary gains that can accrue from the illness. To be cared for and fussed over, to be creating concern in those close to one, all can bring about reactions that may meet the individual's immediate needs. He then may utilize symptoms, incapacities, and limitations to a degree out of proportion to the physical findings, in order to achieve other things, or to bring people around to his way of thinking, such as, "You do as I say, or I'll get mad and that would be bad for my heart." In other words, a patient may use this and, I emphasize, not consciously, for his own ends. He is believing what he says and is sincere. What he needs is help to adjust to this condition in both directions - one, to recognize and abide by his limitations as comfortably as possible, and two, to not give in to the limitations and symptoms in such a way that he is using them to gain something else, plus not giving in to them to a degree not indicated by the reality factors of the illness.

Special mention should also be made

in regard to children. Children may require hospitalization for cardiac problems and for prolonged periods of time. Reactions of children will depend on many different factors of which age is one important one. If hospitalization is involved, then the factors pertaining to this reason for hospitalization for any reason enter in. Among the areas to be considered are the ways the child's feelings are handled, how their anxiety and fear is dealt with, how parental separation is dealt with, plus the factors specifically related to helping the child with the necessary adjustments to his illness, and helping with any necessary adjustment to limitations. Depending on the age of the child, it may at times be very difficult to achieve the degree of control of physical activity desired. As a result there may be a tendency on the part of those caring for the child to overemphasize the need for limitations, arousing fear in the child, as to disastrous consequences if they don't adhere to a specific regime. One needs, of course, to be realistic but also considerate, and age of the child with its implications as to ability to understand or to grasp the situation enters into the problem considerably. If excess fear is aroused in the child, a basis is established for excess anxiety with excessive concern and preoccupation throughout life with the result being a cardiac cripple out of proportion to the physical status. With children, and also adults to some degree, fear can be aroused quickly in new and unfamiliar surroundings. The child is usually much less able to handle this fear than the adult. With care of the child in the hospital there needs to be a large staff as adequate occupation of time with sufficient staff to be able and ready to help with the

uncomfortable or frightening moments can go a long way toward easing the problem for the child.

The same factors enter in here as for any age in terms of overreaction, insufficient restrictions, and secondary gains. However, since children, depending on age, can in a hospital setting be less able to occupy themselves, more assistance is needed. Also, since they are less able to evaluate what is going on around them and to them, more assistance and time in helping them with their fears and anxieties is necessary. The child is a human being, too, who can become very scared. He also is a human being who can turn his illness into secondary gain channels, or he can overrestrict himself, or he may not restrict himself sufficiently.

What all has been referred to so far, very briefly and in a general way, is the person-the individual himself who has real honest feelings such as anyone of us might have. This person may be a man or a woman, or a child, or a grandparent who suddenly or gradually has to adjust to a physical disorder, and whose reactions may well influence the outcome of the disorder. The adjustment usually needs to be a long term one, usually a lifelong one, and an adjustment which may mean radical changes in how he will spend his future. It may and can even mean radical changes vocationally as well as recreationally. Too often the individual can be forgotten and instead one thinks of that coronary case or that cardiac failure patient in room so and so, rather than Mr. John Smith, father of four young children, just reaching the apex of his career and then has a coronary, or Mrs. Sarah Brown whose cardiac failure is going to prevent her attending

her granddaughter's wedding next week. If the wedding is postponed because of her illness, will she feel guilty, then depressed because she feels so responsible for the delay? Will Mr. Smith, mentioned above, become discouraged and depressed? Will he ignore symptoms and warning signs, or will he be too alert to them, become too conscious of them, and limit himself to a degree out of proportion to the physical needs? Will he instead adjust, according to the actual needs and capacities his cardiac condition requires and find an adjustment somewhere in the middle?

It is at times very easy to become absorbed in a very interesting symptom or problem, forgetting the individual who has the symptom and forgetting what they may be experiencing. Sometimes it is easier, but not advisable, to ignore this aspect and become very remote because of the tension or anxiety that is aroused in us by the patient for various reasons. What is necessary is a line of approach that can be helpful without at the same time identifying with the patient or taking on his symptoms. It means one has to be alert to what they themselves are feeling in reaction to the patient and not letting this reaction interfere with firm and realistic handling. It means not being too unsympathetic while at the same time not being too sympathetic. In this area the question of the problem of the patient who does not cooperate or does not seem to understand the need to cooperate enters in. Firmness, consideration, sympathy, and tolerance are all necessary. To further understand this problem one would need to know why this particular pattern was occurring in that particular person. It is a self destructive approach on the patient's part. It

may be that it is a result of fear and anxiety with the use of denial as already described entering in. It may stem from feelings of uselessness and of being of no use to anyone. At such times it is necessary to assess how much and what is really needed in the way of restrictions, of which is more upsetting and necessary—rigid adherence or less rigid adherence to a regime. One fact can be kept in mind and that is that only the persons themselves can decide if they will or won't follow a particular regime.

Perhaps in some situations psychiatric assistance may be helpful in arriving at the reasons behind the negativism, to help the patient in finding out why he can't cooperate fully. Again, however, no one can force him to use such psychiatric help. Usually all one can then do is to be consistent, firm, and insistent coupled with adequate sympathy and understanding.

Another area also prominently enters into this subject of emotional reactions. This has to do with the fact that for each patient there is usually a family and relatives. It is necessary to be alert to whatever reactions they are having to the patient's illness. They too will experience fears and anxieties plus perhaps other feelings such as guilt. These feelings all can lead to pressures on the physician to try this or that, or cause multiple questions, or cause criticism. It is not at such times easy to remember that perhaps much of these types of reactions may stem from fear and anxiety. Of added importance is the effect on the patient who may already feel anxious over the effect his illness will have on his family. Added to this is the anxiety aroused by unfamiliar terms and procedures for which no simple

explanation is given to either family or patient.

To fully understand in detail all the possible reactions and causes would involve a thorough study of psychiatry and a thorough study of the individual personalities having a certain reaction. There are times when a psychiatrist is needed or might be helpful, but there is also a great deal others in frequent contact can do through their attitudes, their approach, by using a balance of firmness, understanding, consistency, realism, and sympathy. Obviously, there is usually never one and only one answer as to how to cope with a specific reaction. There needs to be many variations. and these variations can be as greatly different as any two people. For nearly all situations there may be more than

one right answer, and what may be the appropriate and comfortable approach for one person may not be for the next person trying it. The patients we all see are different personalities and just as important is the fact that those treating patients are also all different personalities.

In conclusion, however, there is one common factor that can be stated. That is the fact we are all human beings with the same basic feelings. We are all entitled to these feelings and we all like recognition of our feelings—whether we are a patient, a doctor, a nurse, or a relative, and if a patient regardless of whether we are eight or eighty.

The Langley Porter Clinic Parnassus and First Avenues



Disease of the Vulva

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Dince the vulva is embryologically of ectodermal origin, the lesions arising in the area are primarily those affecting the skin in general. There are, however, certain unusual features of the vulva which tend to complicate the picture. The vulva develops at puberty as a secondary sex characteristic, when the labia majora reach prominence as a result of the deposition of fat in the area, the growth of hair and by the secretory activity of the very specialized apocrine gland. The latter is found primarily in only a few areas of the body, namely, the axilla, breast, peri-anal region and external genitalia. The area is exposed throughout life to a variety of traumas, e.g., the stimulation of coitus, the irritation of menstrual blood and the protections used at these times, the injurious moisture of vaginal discharges and secretions of skin glands, and often, urine and occasionally by fecal contamination. Finally, there are a large variety of diseases affecting this area, many of which are common to the integument in general, but a few are more commonly seen on the vulva than elsewhere, e.g., the venereal diseases.

Inflammatory Disease Any of the usual afflictions that are found on the skin, obviously may be seen on the vulva. There are, however, certain ones that are more frequent offenders. Intertrigo falls into this group. In areas where moist surfaces are in apposition, especially in the obese patient, the reddened, damp, irritated lesions of intertrigo are most commonly discovered. In the later stages, whitish thickening with cracking may appear at the margins of the intertrigo and simulate "leukoplakia." Seborrhoea and seborrhoeic dermatitis also constitute rather constant problems in the vulvar area. The former, an over secretion of the sebaceous glands, is rarely symptomatic unless cleanliness is not observed and then the oily secretion may lead to intertrigo. The dermatitis, resulting from inflammatory reaction in the glands produces a patchy reddening of the skin extending into the adjacent thighs. In the well developed stages of the disease scales are recognized in the slightly elevated reddened areas. In the moist phases of these lesions, careful drying and use of powder is usually satisfactory

treatment. In the drying phases, an anti-pruritic lotion such as carbonis detergens or calamin in zinc oxide, is more helpful.

More localized varieties of infectious processes are those limited to the glands in the area. Folliculitus is not uncommonly seen and boils in one or more follicles may result. Not infrequently patients will be plagued by a series of such boils in the general region of the vulva and perineum. Often, one is the result of contaminant by the discharge from a draining lesion in an adjacent area. Obviously, cleanliness, the use of loose, non-irritating clothing, local antibiotic or chemo-therapeutic ointments and local wet heat are important in controlling the spread. Rarely it is necessary to produce a vaccine from the specific organisms for certain persistent cases. Individual sebaceous gland infections will produce lesions similar to the above mentioned boils and are usually amenable to similar therapeutic measures. Finally, of course, Bartholin gland infection presents as a vulvar disease and is often, though certainly not always, the result of gonococcal invasion of the gland, Again local heat and antibiotics are valuable means of treatment. In all of these specific, localized infections it should be remembered that incision and drainage of the fluctuant area is still the most efficacious method of handling an abscess if such develops.

Sensitivity Reactions In recent years, more reactive phenomena have been noted on the vulva as a result of the use of more local medications, more scented soaps and ointments, and a complicated variety of materials in underclothing. Although local anesthetic ointments may be very soothing to local irritative lesions, it should be remem-

bered that such therapy is inadequate where a specific disease exists and furthermore, many people are sensitive to the local anesthetic. The plastics used so frequently in underclothing today, although easy to launder, very attractive and long-wearing, produce more sensitivity reactions locally than silk and cot-In the non-specific irritative lesions, especially if it is associated with the menstrual period, the protection used externally at this time may be the causative agent. In recent years, the common employment of antibiotics in the treatment of infections, has occasionally resulted in peri-anal and vulvar eczema and its associated pruritus. This cannot be considered a sensitivity phenomenon, but rather the result of a sterilization of the vaginal and anal areas of the usual bacteria which control the spread of fungi. With this control eliminated, the fungi grow unmolested resulting in the usual local skin reaction. Treatment of these sensitivity reactions consists obviously of recognition and removal of the causative agent, and use of anti-histamines locally and by mouth. Cortisone ointments have been especially helpful in these conditions.

Conditions Secondary to Adjacent Disease Irritative conditions due to adjacent abnormalities in the vaginal canal will frequently result in local inflammatory reactions on the vulva. In the pre-puberty and post-menopausal eras, the vaginal mucosa is extremely thin and susceptible to certain specific and other non-specific infectious processes. Cases of pre-puberty gonococcal vulvo-vaginitis were not uncommon findings in any active dispensary practice 20 years ago, and an occasional case was discovered in a post-menopausal patient. These cases were chronic prob-

lems for many years until Lewis recognized the relationship between spontaneous cure and the menarche. As a result of this observation, systemic and later local natural or synthetic estrogenic vaginal suppositories (TeLinde; and TeLinde and Woodruff) were used with substantially 100% results. Today, the gonococcus is a rare cause of vaginitis, and the treatment is generally antibiotic in nature. However, non-specific prepuberty and especially post-menopausal vaginitides are common problems and if the physiologic nature of the afflication is recognized, local estrogenic suppositories or creams may be used with great beneficial effect. Not infrequently with the diffusely reddened vagina and cervix there is an angry, irregular injection of the region of the urethal meatus. This condition also responds readily to the local, intra-vaginal use of estrogens, and does not need fulgeration, cauterization, excision or other traumatizing procedures, which usually aggravate the situation.

These infections are obviously not problems concerning the menstruating woman where the thick vaginal mucosa resists such disease. However, the physiologically adult female is often plagued with fungus, yeast and trichomonas infestations of the vagina and concomitant vulvar pruritus. In fact, it is frequently the latter for which the patient seeks medical aid. Consequently, the vagina should be thoroughly inspected as the possible source of the external irritation. The drainage of urine or feces may produce symptoms related to the vulva. Such discharges generally originate from fistulae between the vagina and the adjacent bladder, ureter rectum, or rarely, other parts of the intestinal canal. The fistulae result

from trauma, malignancy and/or its treatment. Finally, uterine prolapse may be the sole cause of a traumatic, irritative vulvitis.

Systemic disease producing local vulvar symptoms is relatively rare. However, the onset of diabetes may be heralded by a vulvar pruritus and evidenced locally by a well circumscribed, intense inflammation (Fig. I) involving the entire external genitalia. There is not infrequently a concomitant fungus infection of the vulva and adjacent vagina, and the treatment of this infection is as important symptomatically as is the therapy of the diabetes, A vitaminosis, anemia and debilitating disease may produce a variety of irritative lesions of the vulva, however, they rarely play such an important role as that seen in diabetes.

Specific Infections The vulva holds one of those uncomfortable positions in medicine by virtue of being the site of lesions which may come under the jurisdiction of the dermatologist or the gynecologist. As a result of this ambiguous situation, frequently the patient with such a lesion is in the middle, especially if the disease happens to be one of the chronic pruritic problems which fails to respond to the usual therapies.

The venereal diseases, once dreaded because of their widespread destructive lesions, have largely been controlled by an active social service and public health program and by use of vigorous antibiotic therapy. However, in spite of the great reduction in the number of cases of these diseases in this country, it has not been wiped out entirely. Furthermore, there is still widespread disease of this nature in Asia and Africa. And, although the acute stages of the disease may be few and far between, the end

Fig. 1. Diabetic vulvitis—the shiny area is intensely reddened and well circumscribed.

Fig. II. Elephantiasis of the vulva resulting from lymphogranulomatous disease.

results are not uncommonly in evidence in many areas, particularly in the South. It should be remembered that these diseases produce widespread tissue changes in the chronic phases, which phases may develop years after the acute ulcerative lesion has been noted. This is particularly true of the virus infections (lymphopathia venerum and granuloma inguinale). The former infection results in blockage of lymph channels and lymphoedema with the occasional development of elephantiasis (Fig. II) of the labia majora especially. More commonly there is tissue breakdown and resultant stricture or breakdown of the recto-vaginal or vesico-vaginal tissues. These, quite naturally lead to urinary retention or reduction in calibre of stool, by scarring and strictures, or incontinence of urine or feces by breakdown of the intervening tissue septa with fistulo formation or fenestration of the labia. Whereas lymphogranuloma distorts the area, granuloma inguinale produces exuberant granulomatous tumor which may spread to other areas of the body if not controlled locally. The disease in many respects acts like a malignancy, with general debility and anemia. Finally, carcinoma may develop in the chronic lesions of either one of these two infectious processes. In the study of fifty carcinomas of the vulva at the Johns Hopkins Hospital, ten were believed to have originated from granulomatous lesions (Fig. III). Furthermore, it should be noted that the malignant transformation in the cellular





pattern often produced no marked change in the gross picture, so that tissue study was necessary to prove the diagnosis in each case. This, of course, is not true for granulomatous disease, but holds for all chronic irritative lesions that do not respond to therapy. Biopsy of the tissue is the only adequate diagnostic procedure in such cases.

Diagnosis and therapy for the acute phases of the so-called "venereal diseases" is well documented in medical texts. Serologic tests and dark-field examinations establish an ulcerative lesion as being syphilitic in nature. Proper penicillin therapy with precautions for reactions yields uniformly good results. "Chancroid" is caused by the organism, H. ducreyii which can be satisfactorily cultured today. While the ulcers of the other so-called venereal diseases

are relatively painless, the chancroidal ulcer is painful. Local sulfonamide therapy and cleanliness usually suffice to control such disease. The Frei antigen, now commercially available as "Lygranum" produces positive skin reaction in over 80% of the patients who have ever had lymphogranuloma. The possibility that the acute lesion may not be due to this virus must always be considered, especially if old chronic lesions suggestive of lymphogranuloma are present. Broad spectrum antibiotics are of value in limiting such local lesions, however, this may be primarily by reducing the reaction of secondary invaders. Granuloma inguinale was indeed a serious infection until the past decade. Diagnosis was established by Giemsa stain of the scrapings or tissue from the lesion and the study of the prepared slide for

Fig. III. Carcinoma beginning in the destructive granulomatous lesions of granuloma inquinale.

Lesion treated for 2 months as benign until biopsy was taken.



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cellular inclusions, the so-called "Donovan bodies." The excellent results of therapy with streptomycin and chloromycetin are a far cry from the puny efforts with tartar emetic and fuadin in the 1930's and early 1940's.

Tuberulosis is a very rare offender as far as the vulva is concerned. Brown, in the study of 158 cases of pelvic tuberculosis at the Johns Hopkins Hospital found no case of vulvar involvement. The rare lesions are ulcerative, often multiple and shallow, with grayish blue irregular borders. An occasional fistula may develop from a tuberculous infection, although these are more commonly found in the peri-anal region.

Leukoplakia, Lichen Sclerosis et Atrophicus and Kraurosis Much confusion has been associated with the use and abuse of these terms. Leukoplakia, by simple definition, means white place, and has frequently been employed in description of any change in the vulvar skin which appears white. Under such circumstances vitiligo (areas of depigmentation) (Fig. IV); lichenifications associated with intertrigo, seborrhoeic dermatitis, and other chronic dematihyperkeratosis areas; tides: sclerosis as well as true leukoplakia and some malignancies might be described as leukoplakia. However, even though the literal definition is ambiguous, the connotation of the term is, generally speaking, quite specific. Most physicians think of a true precancerous lesion when the term leukoplakia is used. This is as it should be, since such well-known investigators as Taussig, Way, Hertig and others have emphasized the seriousness of this condition. However, the lesion of which they speak is not an indefinite one, but a very particular one, characterized by thick, white patches elevated



Fig. IV. Vitiligo showing extensive whitish depigmentation of the vulva. No relationship to leukoplakia.

above the level of the surrounding skin, often excoriated in linear fashion with occasional superficial ulceration, and frequently situated in the region adjacent the clitoris. The adjoining skin may be thickened by the effects of the pruritus, the characteristic symptom of the lesion. Microscopically the changes range from a mild hyperkeratosis and acanthosis with elongated rete pegs and slight dermal inflammatory infiltrate, to true invasive carcinoma. This exposition does not mean to imply that carcinoma can be found only under these circumstances, but rather that when this condition exists it should be carefully studied microscopically and looked upon with the same suspicion that one affords any precancerous lesion.

Varieties of leukoplakia have been described especially by Taussig, who used the modifying terms hypertrophic and atrophic, the former to indicate the lesion referred to in the previous paragraph, and the latter to designate a thinning and flattening of the vulva with more or less diffuse whitening of the skin. This atrophic lesion often extends around the anal orifice and could be found on other areas of the body. This condition seems almost, if not absolutely, identical with the disease known to the dermatologist as lichen sclerosis et atrophicus. Furthermore, another atrophic condition, kraurosis vulva (a shrinkage with flattening of the vulva and constriction of the vaginal outlet) appears to further confuse the issue. It seems fair to say that these three lesions, i.e., atrophic leukoplakia, lichen sclerosis et atrophicus and kraurosis, are all atrophic in that the microscopic picture shows hyperkeratosis with marked thinning of the epithelium and a collagenization of the underlying elastic

Finally, and of major importance, is the fact that carcinoma may begin in any of these conditions, however, the potential is not nearly so great as in the case of true leukoplakia.

Treatment of Vulvar Disease consists largely in:

 Establishing Diagnosis: Effort has been made in the preceding paragraphs to briefly outline the common conditions which affect the vulva with some of their usual characteristics.

Worthy of further comment is the use of biopsy, especially in the chronic irritative or ulcerative lesion. It cannot be too strongly emphasized that the naked eye cannot determine cellular changes. Furthermore, it is infinitely easier to treat a pre-cancerous or intraepithelial lesion than it is to treat invasive disease.

2) Producing Symptomatic Relief: Pruritus is the common symptom of vulvar disease, although other irritation or pain may be present. It is of major important to eliminate this symptom if humanly possible. There is tremendous evidence to suggest that chronic irritation, whether induced by inflammatory reaction, chemical or biologic change, plays a major role in the development of anaplastic disease. monly patients with carcinoma of the vulva have had symptoms for many years. Although it must be granted that pruritus is a miserable symptom to treat, nevertheless if its elimination will play a part in the elimination of vulvar cancer, it is a worthy project. Some suggestions have been made for the more specific diseases. For the non-specific conditions, anti-pruritic ointments should be employed, together with good hygiene and adequate diet. It is useful to supplement the latter with multivitamins; particularly helpful seems to be vitamin A. In the obese patient, drying powders will help eliminate the excoriative effect of moisture in the opposing skin surfaces. Cortisone ointments and lotions have been helpful, especially in the non-specific group. In the atrophic conditions, anhydrous lanolin may be of great value.

Local anesthetic creams and ointments should be used, if at all, with caution, remembering that sensitivity reactions may bring about a condition more irritating than the primary one. Antibiotics locally also have been of little value except in the more specific venereal disease. The poor results far outweigh the permanent relief afforded by ray therapy.



Fig. V. Scarring resulting from eight x-ray treatments to vulva. Patient had intensive pain and pruritus.

Surgery, in general, should be reserved for the treatment of neoplasms, benign and malignant, and of pre-cancerous lesions. Alcohol injection of the vulva and perineum may be used for certain non-specific chronic cases which resist medical therapy. Finally, in these stubborn cases, the Mering denervation operation has been very successful in eliminating symptoms with some resultant amazing restorations of the skin to its more normal texture and histologic appearance.

X-ray therapy has been widely used

as treatment for a variety of pruritic lesions of the vulva. Although there is no question that some symptomatic relief may be obtained, many distressing end results (Fig. V) have resulted from apparently minimal diosage of x-ray. Some dermatologists are suggesting "Grenz-ray" of low voltage therapy as an answer to the damaging effect of the more deeply penetrating rays. In general, however, the majority of therapists have discarded x-ray therapy in the treatment of benign vulvar disease, and reserve such therapy for metastatic or recurrent malignant disease.

Vulvar diseases offer perplexing and annoying problems to the physician and as a result, are frequently inadequately diagnosed and treated. Furthermore. the practitioner often obtains little or no aid from the "specialist" to whom he may refer the problem, and there may be a definite problem as to whom he should ask for consultation. The gynecologist is frequently poorly trained in basic dermatology, and has a tendency to treat all "itches" in which there is no circumscribed surgical lesion or any definite internal genital tract disease, by his own favorite anti-pruritic ointment. By the same token, the dermatologist much more familiar in the specific dermatologic problems, may have a tendency to overlook the focus of the problem in the higher genital canal and also may be slower to biopsy chronic irritative lesions. The obvious answers to these problems are a closer working relationship between the specialist involved and/or better training in the overlapping features.

Why Vaginal Hysterectomy?

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The familiar question, "Why Vaginal Hysterectomy?" is often asked but is seldom answered convincingly. The physicians who ask this question usually have already made up their minds that abdominal hysterectomy is the only way to take out the uterus. In direct contrast to this point of view we first ask ourselves "can this uterus be taken out vaginally?" We feel that standard techniques in vaginal hysterectomy have now been perfected so that it is one of the safest and most satisfying of gynecological operations.

There have been many reports and discussions in the recent literature comparing abdominal versus vaginal hysterectomy. We feel these arguments are futile and unnecessary. There are certain uteri which should be taken out by the abdominal route and others in which vaginal hysterectomy is the procedure

of choice. The patient's complete clinical picture and pelvic findings should dictate the procedure to be chosen. Relief of symptoms and restoration of function by the safest, speediest and least traumatic method is the ideal searched for in all surgical procedures. We like to do vaginal hysterectomies, but we certainly are not guilty of referring patients because they have big fibroids or P.I.D. and have to be done abdominally.

The indications for vaginal hysterectomy have increased with refinements of surgical technique. The most obvious indication is the menopausal multipara with prolapse, cystocele, enterocele, rectocele and stress incontinence. Even the "die-hards" can usually be convinced that vaginal hysterectomy and repair is the operation of choice in these cases. The less obvious cases require a little more convincing, as the increased indications are largely dependent on the operator's skill and familiarity with vaginal work.

Severe menorrhagia and metrorrhagia can be treated by vaginal hysterectomy; also fibroids which are freely movable and small enough can readily be removed vaginally. Extensive uterine bleeding in younger patients resulting in severe secondary anemia which does not respond to medical treatment or D & C may be treated by vaginal hysterectomy; this, of course, should only be used as a last resort. Bleeding in the menopausal patient can be readily treated by vaginal hysterectomy; besides correcting the bleeding the menopausal symptoms can then be treated with adequate hormone therapy without danger of further bleeding. We all have been faced with the perplexing problems of trying to relieve menopausal symptoms

at the expense of causing undesirable and confusing bleeding from the uterus. The possibility of malignant change must always be kept in mind. We have found routine Papanicolaou smears followed by curettement at the time of surgery most useful in ruling out malignancy; this curettement also gives us a better idea as to the size of the uterus. Patients in the older age group with resistant chronic cervicitis can easily be treated by vaginal hysterectomy.

There are definite contraindications to vaginal hysterectomy and the keynote to success in vaginal surgery is to know these contraindications and select cases accordingly. "Stunt surgery" is to be condemned; there is no point in seeing how large a tumor can be pulled through the vagina. Patients who have extensive endometriosis, large fibromyomas, chronic pelvic inflammatory disease, ovarian tumors, and those who have undergone multiple pelvic operations should not be operated on by the vaginal route. Contrary to popular opinion, the fact that a woman is nulliparous is no contraindication to vaginal hysterectomy.

Vaginal hysterectomy is probably the oldest major surgical procedure used in gynecology. In early days, before the advent of asepsis, vaginal hysterectomy was used to rid patients of conditions which had become unbearable to them. such as procidentia or carcinomatous organs; to the amazement of the physician some of these patients lived. In the earliest days of aseptic surgery investigators were able to show that due to the increased resistance of the pelvic peritoneum and decreased soiling of the upper peritoneal cavity, the vaginal approach was safer than the abdominal. Duhrssen, in 1899, reported 500 vaginal

operations and listed these reasons for his choice of his procedure:

- Absence of abdominal scar with freedom from danger of post-operative herniation.
- Few subjective annoyances post operatively.
- Rapid convalescence.
- Low mortality rate.

These four reasons, along with a few more, remain as paramount advantages of vaginal hysterectomy.

Vaginal hysterectomy is preferred to abdominal hysterectomy when there is plastic work to be done on the vagina. Removal of the cervix is automatic and plastic repair of the vagina can be accomplished safely and in much less time than having the procedure follow, or precede, the abdominal operation. The fallopian tubes and ovaries should always be inspected after removal of the uterus. If there is ovarian or tubal pathology, it can usually be corrected at this time.

Rarely have we had to go above to take out tubes or ovaries, but we do not hesitate to do so when indicated. We feel that this is no more hazardous or difficult than the so-called double procedure.

Safety is one of the operation's greatest assets; since it is almost entirely an extra peritoneal procedure there is little contamination of the pelvic peritoneum. This, of course, reduces the incidence of peritoneal adhesions and make the post operative course distinctly smoother than in abdominal hysterectomy. Some patients who are definitely poor surgical risks for abdominal procedure, such as obese patients and patients with various types of cardiovascular disease, can safely undergo vaginal hysterectomy. Anesthesia need not be as profound as

in abdominal hysterectomy and ambulation can be accomplished easier and more readily due to absence of the splinting which accompanies the abdominal incisions.

We feel that confidence and proficiency in vaginal hysterectomy should enable a gynecologist to relieve seventy to eighty per cent of his patients' pelvic trouble by the vaginal approach.

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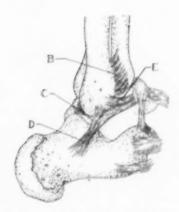
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Medial View of Ankle showing Deltoid (Internal Lateral) Ligament (A).



Leteral View of Ankle showing Anterior Inferior Tibio-Fibular Ligament (B), and the External Lateral Ligament composed of Posterior Talo-Fibular Ligament (C), Calcaneo-Fibular Ligament (D), and Anterior Talo-Fibular Ligament (E).

Weight Reducing Effects of

Certain Induced Rhythmic Motions

Too much effort, or too much discomfort always seems to be one of the major reasons why the obese patient, sooner or later, abandons every sincere attempt to take off the surplus poundage.

Lately, however, several reports from wholly unrelated research projects have simultaneously focused attention upon the possibility of an entirely new drugfree and effortless way to produce weight loss in obese subjects.

The first of the research papers came from Mayer and Stare, et al., of the Department of Nutrition, Harvard Medical School, Boston. They reported that when obese test rats were exercised under carefully controlled test conditions for low durations of twenty minutes to one hour at a time, the animals ate slightly less than did the sedentary control animals.

They also noted that the body weight of the exercised test animals gradually decreased on the so-called low-range exercises, while the weight of the sedentary control animals slowly increased.

After repeated confirmation of their findings, the doctors concluded that "moderate, frequent and consistent ex-

ercise is a very helpful aid in weight reduction."2

These findings have been subsequently confirmed in human subjects. However, in spite of these reports, it still appears that the major task is to teach obese subjects how to exercise in such a comfortable manner that they will adhere to a program capable of burning up excess calories without wearing out the patient.

A very significant clue to how this might be accomplished was found in a preview of a paper now being prepared for publication by Laurence E. Morehouse, Ph. D., Physiologist, Director of Research, Department of Physical Education at the University of California at Los Angeles.³

Dr. Morehouse, working in a fiveman team, composed of himself, another physiologist, a research assistant, a registered physical therapist, and a biochemist, has just completed an investigative analysis of the exercise values of a new type of therapeutic appliance designed to mechanically induce motion in the human body. Noteworthy in Dr. Morehouse's report was the conclusion, which stated in part that "the data and observations in this study of passive

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body motion induced by an oscillating device support the following conclusions:
(1) In certain positions requiring postural effort against gravity, the body motions induced by the oscillator caused oxygen consumption to be elevated from 9 to 12 per cent. Accumulation of oxygen debt, production of blood lactic acid, and elevation of heart rate are confirmatory evidence of the exercise effect of this form of body exercise, etc."

Morehouse further points out that the increase in oxygen debt of 9 to 12 per cent was demonstrated on highly athletic subjects and that a normal population group should show an even larger oxygen debt and greater biochemic changes.

Of special interest is the statement that "at the end of the four-hour experimental period the post-exposure heart rate was 17 beats per minute less than it was at the outset of the pre-experimental half-hour rest period. This decline in heart rate indicates an overall relaxing effect of the exposures. The series was performed in the evening and the subject reported the next morning that he had fallen asleep easily and had slept soundly all night."

Here then appeared to be induced

exercise that had an over-all relaxing effect and yet was dynamic enough to produce a stress on the body sufficient to tax its metabolic processes.

For these reasons we decided to study the influence of this new form of induced rhythmic motion upon weight loss in certain obese subjects and to determine whether such motion increased metabolic activities sufficient to produce a measurable increase in caloric utilization with a minimum of effort.

Material and Methods Twenty-one obese subjects were observed under certain specific but adverse conditions.

The device* used to induce motion consisted of a motor-driven platform gently and rhythmically moving back and forth in an arc through an excursion of three-fourths inch at the rate of 126 times per minute.

Two movable beds each contained pins at one end for attachment to any of the four sides of the base of the motorized platform. The beds attached longitudinally to the motorized platform permitted a side-to-side motion to the body. The supporting framework at the outer end of the bed was adjustable, permitting a variety of elevations or depressions of the head and feet. The subject remained supine for fifteen minutes in each of four different positions as follows: To induce superior-inferior motion of the thorax, the subject assumed the first position with the transducer transverse under the thoracic region from the levels of the clavicles downward across the trapezius muscles to approximately the eighth thoracic vertebra.

In the second position, to induce superior-inferior motion of the pelvis and abdomen the transducer was transverse under the pelvic region from the

^{*} Metabol'Aid, Los Angeles 32, California.

level of the iliac crest downward.

The transducer was then changed to the longitudinal aspect, in the third position, to induce lateral motion while the subject rested with the transducer oscillating the thoracic region laterally.

Finally, the subject was positioned with the transducer under the pelvis from the iliac crest downward to induce lateral motion of the pelvis, abdomen, lower back region, and legs.

In order to simulate normal living conditions and problems encountered in general practice and in everyday life, the twenty-one subjects were observed during a home "do it yourself" program period. In this way, consistent daily treatment with induced rhythmic motion could be maintained, but regularity of time of day for the treatment would be difficult to establish and could thus become a strong variable.

All test subjects were enlisted as of February 2, 1956. They were each given a complete physical examination to determine that they were normal Caucasians in good health, with only a diagnosis of obesity.

The subjects were taken from various walks of life and from all age groups to assure a broad spectrum of obese types and environmental problems.

Weights and measurements were taken in all cases. Measurements included height, biceps, bust, underbust, waistline, buttocks, thighs, calves and ankles.

When all physical examinations, including measurements, weight, blood pressure, pulse and so on were completed, each subject was thoroughly instructed to immediately avoid any attempts at dieting, to avoid reducing drugs, appetite appeasers, special exercises or any other type of weight reducing measures that might be available.

As of February 3, 1956, they were to eat and drink whenever they had the desire to do so and eat or drink whatever they particularly wanted, whenever they wanted it.

In order to completely adjust the test subjects to their now "free-eating" program, a six-week readjustment period was established before any induced rhythmic exercise procedure was begun.

Officially, the actual test started as of March 12, 1956, at which time each subject began to take a minimum treatment of one hour per day of induced rhythmic motion some time during the day.

Subjects were required to keep a complete record of everything they had to eat or drink every day of the week. This record, together with a record of the time spent in daily induced rhythmic exercise was to be submitted to the attending physician at the end of each twoweek period.

As the subjects signed and turned in their bi-weekly records of eating and induced exercise, they were given a medical check-up, in which blood pressure, pulse, weight and measurements were all observed and recorded.

The time of examination and toilet habits before weigh-in were stabilized as much as possible in such an open free-test program.

Discussion Of the original twentyone subjects to enter the program,
fifteen completed the prescribed ten-week
test schedule, while six were dropped
from the test for various reasons. One
was disqualified for failure to reveal
that she was taking pituitary for headaches; one developed a virus and lost
too much treatment time; one left town;
two failed to maintain minimum treatment time schedules, and one dropped

out because of discouragement.

The use of a control subject was very seriously considered but it is established in the literature that any healthy obese subject who has no increase in daily activities, does not resort to medicinal agents for reducing, nor decreases caloric intake would when following their regular eating habits increase weight rather than maintain or lose it. 4.54 Therefore, it was felt that a control subject was unnecessary and that each subject could through his previous history act as his own control.

The only essential change in their everyday living patterns was the one hour daily treatment with induced rhythmic exercises. Consequently, since all subjects ate freely just as the urge moved them to do so and since they resorted to no other means of reducing, any weight loss should be directly attributable to the regular daily application of the induced rhythmic exercise. A noteworthy point of the actual results of the test is the fact that all subjects, completing the ten-week plan lost some degree of weight in spite of all variables, either psychological or otherwise.

The accompanying graph illustrates that the individual weight losses in the fifteen subjects who completed the full ten-week program varied from three pounds to twelve pounds.

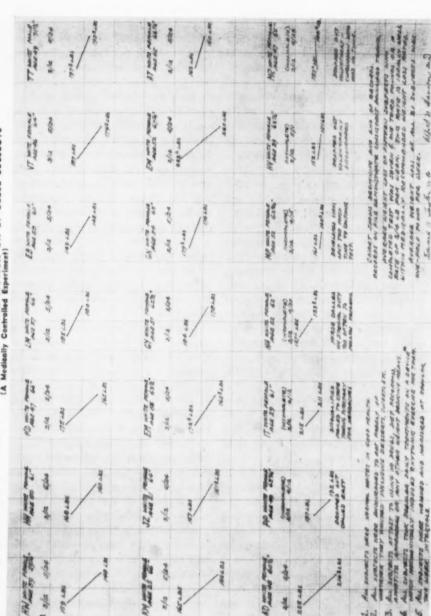
It may or may not be of particular significance, but the weight reducing effect of this motion seemed to fall into a specific pattern not directly associated with the number of minutes of exposure to treatment. This effect can be seen from the graph in the respect that, of the fifteen subjects who finished the program, five subjects showed a loss of from six through nine pounds, while the remaining five demonstrated a loss in

weight of ten through twelve pounds each.

The chart also shows that of the six subjects dropped from the program early in the test, one had lost five pounds, and two others had lost four pounds each. All subjects in the program reported that this particular form of induced rhythmic exercise had a strong relaxing effect upon them and seemed to induce a noticeable feeling of well-being. As an interesting sidelight we observed that in the recorded hypertensive subjects there was a measurable drop in blood pressure not directly related to weight loss. It is not yet known whether such induced rhythmic motion is necessarily hypotensive in action or is purely coincidental to the relaxation that the subject reported was induced during treatments, or whether the blood pressure drop is attributable to the supine position maintained for the one-hour treatment periods daily.

Summary Twenty-one obese subjects were examined, weighed, measured and then thoroughly instructed to avoid all reducing drugs, appetite appeasers, diets or additional exercise of any kind for a period of sixteen weeks. All were encouraged to eat or drink anything that they might want as often as they wanted. At the end of six weeks, in which many of the subjects registered noticeable gain in weight, the subjects started taking one hour of induced rhythmic exercise daily for a period of ten weeks. No other change was made in their regular living habits. Each submitted a signed complete record of daily food and drink intake and each had a complete check-up every two weeks. The fifteen subjects that completed the ten-week test demonstrated an average weight loss of seven and one-third pounds per person, or ap-

REDUCING EFFECT OF INDUCED RHYTHMIC MOTION ON 21 OBESE SUBJECTS*



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proximately three-fourths pound per person per week. All reported an over-all relaxing effect of the treatments and a strong sense of well-being.

Conclusion

Induced rhythmic motion, when applied to certain areas of the body of an obese subject at 126 oscillations per minute, will when moving the body against gravity, comfortably induce sufficient dynamic exercise to reduce body weight without the use of drugs, appetite appeasers, or diet.

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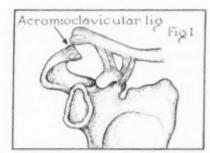
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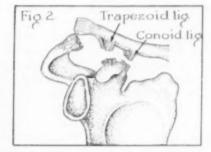
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Clini-Clipping



Partial acromio-clavicular separation (note tear of acromio-clavicular ligament).



Complete acromio-clavicular separation (note tear of acromio-clavicular and coraco-clavicular ligaments).

Intestinal Obstruction in the Newborn

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From the Department of Pediatrics, University of Utah College of Medicine, Salt Lake City, Utah. Only a generation ago the diagnosis of intestinal obstruction in a newborn infant offered a hopeless prognosis. Although this problem is not completely solved, a substantial proportion of such cases now survive surgery to live normal lives.

During the early stages of embryologic life the hollow tube that is to become the gastrointestinal tract is formed by an invagination of the endoderm. The gastrointestinal tract resolidifies and subsequently recanalizes. The gall-bladder and pancreas are outgrowths from this tube-like structure. Somewhat later in development the abdominal viscera is extruded into the umbilical sac by the enlargement of the liver and spleen. As the viscera returns to the abdomen it normally undergoes a rotation that carries the large bowel in a counter-clockwise direction (when one views the fetus from the ventral position) with the cecum finally coming to rest in the right lower quadrant. A great many defects in this developmental pattern are possible, any one of which could result in a partial or complete obstruction of the gastrointestinal tract.

The failure of recanalization of the involved area as the cause of an atresia or a stenosis has recently been challenged and a new possibility as to the cause has been advanced. Nixon1 is of the opinion that atresias and stenoses are the result of extrinsic pressure. This thesis is based primarily on his finding of epithelial squamous cells in that portion of the lumen of the gastrointestinal tract which is distal to a complete atresia. He claims that these cells must be swallowed to reach the lumen of the gut at the various sites at which they have been found and that since there are no such squamous cells on the skin until

the third fetal month, which is well after the time of the suggested solid stage of the gastrointestinal tract, the theory of failure of recanalization is weakened. For the purposes of clarity and brevity the various etiologic factors will be discussed as particular abnormalities are considered.

The First Twenty-Four Hours of Life As a rule, the infant that is born with a partial or a complete obstruction of the gastrointestinal tract shows no external sign of this abnormality at birth. The earliest variations from normal gastrointestinal tract function are so minor that they may easily be overlooked. It is at this time that the infant is in the best physiologic condition for surgery.

The routine procedure in well-managed newborn nurseries is that of delay of the initial feeding for eight to twelve hours following birth. One purpose of this delay is to allow for the appearance of signs of trouble from causes outside of the gastrointestinal tract which may simulate obstruction of the gastrointestinal tract. The healthy newborn infant is capable of consuming two to four ounces of fluid at the first feeding and can do so at intervals of three to four hours thereafter. At least the first feeding, and preferably the first two feedings should be glucose water, so that the potential hazard of milk penetrating into the tracheo-bronchial tree by way of a tracheo-esophageal anomaly is diminished. The first meconium stool will usually be passed during the first 24 hours of postnatal life; it has been well demonstrated that by 48 hours of age nearly all normal newborn infants will have passed meconium.2 During the first several days of life the well-known changes in color and consistency of the

stool take place, so that by ten days of age the stool should be soft, formed and yellow-brown in color.

Diagnosis When intestinal obstruction appears in the physician's differential diagnosis he must consider atresia, intraluminal diaphragms, stenosis, incomplete rotation, midgut volvulus, adhesive bands, the presence of an intraabdominal mass, inspissation of meconium, and other more rare pathologies.

The points of greatest importance, when one is considering the diagnosis of intestinal obstruction in the newborn infant, are the history, the physical examination and the plain film of the abdomen taken in the upright position. As a rule, newborns with obstruction, other than esophageal obstruction, show little or no evidence of abnormality for several hours after birth. As long as 48 hours may elapse with only minimal signs of trouble. When vomiting appears before twelve hours of age the cause is more likely to be an infection or central nervous system damage. These patients demonstrate lethargy, cyanosis and a depressed reflex pattern (rooting, sucking, moro, etc.) as well as vomiting. Newborn infants with esophageal obstruction may regurgitate either while being fed or immediately thereafter. Improper feeding techniques usually result in vomiting shortly after feeding. The presence of active bowel sounds weighs against, but does not rule out, intestinal obstruction. Abdominal distention is a cardinal sign of obstruction below the duodenum but several hours are required for it to become apparent. Complete duodenal obstruction is accompanied by a flat, silent abdomen. In either circumstances, vomiting will follow feeding in from fifteen to ninety minutes. Once vomiting has

started it usually becomes steadily worse and a rapid deterioration in the patient's condition ensues. In a matter of hours the infant will be in serious trouble from dehydration and shock.

One should not be misled by the passage of meconium since many infants with complete atresia of the gastrointestinal tract will pass one or two normal meconium stools during the first twelve to twenty-four hours of life. Contrariwise, it has already been pointed out that under normal conditions 24 or more hours can pass before the first meconium stool appears. One must conclude that the stool pattern is one of the least reliable signs of intestinal obstruction.

In 1941, Cohen^a pointed out the value of the use of air as a radiographic contrast medium and stressed the value of the plain film, but it was not until 1948 that Wasch and Marck⁴ described the normal pattern of air passage through the gastrointestinal tract of newborn infants. Their finding of air in the terminal colon as early as four hours of age and always by eight hours of age, established the diagnostic yardstick for intestinal obstruction in the newborn infant.

Vomiting of the first feeding calls for immediate investigation. A second glucose water feeding should be given in thirty minutes, with expert feeding technique; in the event of a repetition of the regurgitation a small catheter should be passed, via the nose, into the stomach. If the catheter passes into the stomach a plain film of the abdomen will show the presence or absence of air throughout the gastrointestinal tract and the diagnosis of a complete obstruction will be made or excluded. If the catheter does not pass into the stomach, one mil-

liliter of lipidol will outline the point of esophogeal obstruction on a film and may visualize any tracheo-esophageal connection that might exist. Patients who have an esophageal atresia usually exhibit drooling or "frothing" since the mucus in the pharynx cannot enter the stomach.

Differential Diagnosis When the diagnosis of intestinal obstruction in the newborn infant is made within a few hours after birth, many problems of management are avoided and the patient's chances of survival are good. The differential diagnosis as to the exact cause is usually of minor importance. Since this is not always the case the principal differential diagnostic features that one can expect to encounter will be mentioned briefly.

Careful physical examination and study of the plain x-rays of the abdomen will result in specific diagnosis in most cases. In lesions causing complete obstruction at the level of the duodenum (atresia, incomplete rotation of the large bowel, annular pancreas, obstructive bands, etc.) the abdomen will be flat, silent to auscultation, and no air will be seen in the gastroinintestinal tract distal to the point of obstruction. When the obstruction is not complete, abnormally small amounts of air will be seen at varying locations distal to the duodenum. This may cause confusion but should not deter one from making the diagnosis of an incomplete obstruction. When air is confined to one area of the abdomen (usually the left side) one should suspect a midgut volvulus.

The duration of an obstruction below the duodenum will influence the x-ray findings. Storch⁵ has described the normal gut as being formless and shapeless, while the abnormal gut demonstrates "squaring off," continuity, hairpin loops and a layered effect. Craig⁶ has emphasized two important x-ray features of early obstruction, namely, sharp turns of the gut containing trapped air and an increase in the accumulation of air on successive films. If the obstruction is not relieved, fluid will accumulate within the lumen of the obstructed segment and air-fluid levels will be seen in up-right films. This should always be considered a sign of obstruction of many hours duration.

Chisholm? has pointed out the difficulties involved in interpreting x-rays in premature and immature infants. He and his co-workers have seen the clinical and x-ray pattern of intestinal obstruction in patients who had no demonstrable lesion at operation. Others have reported similar experiences.

Inspissated meconium will often contain small radiolucent areas (trapped air) scattered in a random fashion. This was first described by Neuhauser^a and although not present in every case, it is diagnostic of the syndrome when it is seen. If antenatal perforation of the bowel has occurred, there is a likelihood of intraabdominal calcifications being seen on the plain films.

Recently, Clatworthy^o reported a clinical situation which he calls "the meconium plug syndrome." The nine cases that he reported were clinically similar to either meconium ileus, low atresia or congenital megacolon, and were differentiated principally by the ability of the patient to be cured by peroxide enemas or repeated digital rectal examinations, with successive films showing a change in the caliber of the bowel. Biopsy of the bowel in two of his cases showed a normal mesenteric plexus. All of the patients were normal after treatment, with

a follow-up of from three months to five years. None of these patients has exhibited evidence of cystic fibrosis of the pancreas. He believes that this syndrome is caused by an abnormal content of the meconium or a lack of trypsin or some other enzyme in the distal part of the meconium column. This writer has observed four small premature infants who had been "normal" for the first several days of life, then suddenly developed paralytic ileus. Unfortunately, all four infants expired. Rubbery plugs of dark yellow feces were demonstrated in the two infants on whom autopsies were performed.

It is well to point out that one can be misled by certain physical and/or x-ray findings when obstruction is not the only abnormality present. The author has had the experience of hearing reasonably normal bowel sounds in the lower abdomen and visualizing air on the plain film in the locations in which bowel sounds were heard in an infant less than 24 hours of age who, at surgery, was found to have a complete atresia at the first part of the jejunem. The bowel proximal to the atresia was wound around the mesentery in corkscrew fashion and terminated in the lower pelvis. This case is described to illustrate an exception to the general rule, but should in no way change the over-all approach to the problem of obstruction.

The necessity for using a radio-opaque medium to establish the diagnosis of gastrointestinal tract obstruction is advocated by some and heatedly challenged by other clinicians. Such an examination is seldom necessary and is not without some danger. Barium is contraindicated under any circumstances because of the serious side effects that it

may cause. There are other radioopaque media, such as lipiodol, which will do very nicely in the occasional case where a radio-opaque medium is needed.

Management When the diagnosis of obstruction has been made, definitive surgical correction is indicated as soon as possible. If the diagnosis is established in the first few hours of life, while the child is in good physical condition, surgery should be undertaken at once. If the patient's condition has declined, surgery should be delaped until dehydration and shock have been adequately treated. It is of the utmost importance that even under these conditions only a short time be taken to accomplish the correction of dehydration and shock. This should be possible in from 4 to 6 hours in most cases. Although in those cases that require prolonged preoperative therapy there is a greater chance of irreversible change occurring in a segment of bowel whose circulation has been embarrassed, it is unwise to subject a patient who is dehydrated and in shock to a laparotomy. Judgment and experience play a prominent role in proper management. Although fluid and electroylte therapy is an essential part of good management it must be used properly to have the desired effect. Familiarity with the principles of fluid, electrolyte and blood therapy in babies will obviate unfortunate complications. To facilitate the administration of fluids it is best to intubate a vein with a small polyethylene catheter, but one should have respect for the rapid rate at which fluids can be administered by this method. Since blood loss during surgery usually does not exceed 20-30 ml, the administration of blood is often unnecessary.

A physician anesthesiologist is a key figure to the overall success of the surgical management of these patients. It is important that he be familiar with the differences in physiologic tolerance between infants and older children or adults. Special surgical and anesthetic instruments, designed for the small structures found in infants, are a necessity. The surgeon must have an assistant who is equally familiar with the total problem, and, if possible, a pediatrician should be present at the operation to manage the fluid and blood administration.

It is generally agreed that complete corrective surgery should be accomplished whenever possible. For the reader who is interested in information on the techniques of surgical correction a number of excellent publications are available. 10, 11, 12, 13, 14, 15, 14

Post-operative care is as technically difficult and as fundamentally important as the operation itself. Many patients survive or expire as a direct result of the skill in post-operative management. Gastric suction of some type is necessary in the immediate post-operative period but it is not needed as long in patients of this age-group as it is in older children and adults who have been subjected to the same type of surgery. Furthermore, suction may cause acute dehydration and electrolyte loss in a very short time. It is wise to discontinue suction at about twelve hours postoperatively, to determine how the patient will do without it. This can be done in the presence of or absence of bowel sounds since the absence of bowel sounds at this age is not as meaningful an index of the ability of the bowel to function normally as it is in older patients. It is a simple matter to reinstitute suction in an hour or two if the patient shows signs of distention.

It is not necessary to remove the gastric suction tube prior to instituting glucose water by mouth but this method does offer the advantage of decreasing mechanical interference with sucking and swallowing.

When the tip of the suction tube is distal to the pyloris it is wiser to leave the tube in place until the normal action of the gastrointestinal tract is established.

When one or two ounces of glucose water every three hours has been retained on four successive feedings, in the absence of distention and in the presence of active bowel sounds, a formula should be started. Inasmuch as the caloric intake is not of importance at this stage of management, and since the infant is less apt to vomit a dilute mixture, evaporated milk and water in the ratio of one to two is recommended. The patient's fluid and electrolyte balance is maintained during this time by the intravenous or subcutaneous route. It is important to keep the total fluid intake in mind, so that an excess of fluid is not given by the parenteral route. When all has gone well to this point intravenous therapy becomes increasingly difficult because of the technical problem of keeping the drip going at a very slow rate, i.e. three to six drops per minute. It is important that all intravenous fluids, except blood, be given at an even rate over a 24-hour period. This allows for the freedom in the use and manipulation of intravenous fluid and electrolyte therapy that is essential to the successful management of patients with fluid and electrolyte problems. It is important to check the patient's fluid balance every four to six hours. Whenever a change is made a new twentyfour hour period begins.

When oral feedings are being retained each three to four hours in a volume of two to three ounces, a more concentrated formula should be instituted. Equal parts of evaporated milk and water is satisfactory. This formula contains twenty calories per ounce and can be used routinely in full-term infants who are not being breast-fed and in those premature infants who do not require a larger number of calories per ounce. When the patient has progressed to this point the subsequent course is usually uneventful.

Post-Operative Complications

Since complications can occur at any stage of management, one should be familiar with the usual post-operative complications. When re-obstruction occurs it is usually because the surgical correction has been incomplete. An additional ten minutes at the operating table will allow for complete exploration of the bowel to exclude the possibility of another anomaly. When reobstruction does occur, the patient usually requires a second operation and under worse conditions than prevailed at the time of the first operation. Even when a complete exploration is done, there will be an occasional case in which the second anomaly is not discovered or in which re-obstruction occurs as a post-operative complication, due to unknown causes, and is totally independent of any congenital anomaly.

Re-obstruction When re-obstruction occurs in the presence of ileus the management should be conservative for a few hours with the use of suction in an attempt to relieve the distention. This is often successful and in from two to six hours the patient may be ready for oral fluid. Under these conditions, the criteria for the institution of oral feedings becomes more strict. The presence of reasonably active bowel sounds and the absence of distention when suction is not being used are the best of these criteria. The plain falm of the abdomen usually allows one to classify the type of obstruction, or reobstruction, with which one is dealing. Two films two to four hours apart will ordinarily allow the medical team to decide on the best over-all course.

When the patient who has reobstructed does not respond quickly to conservative measures, or when it would be unwise to risk the delay involved in conservative management, the surgeon must re-explore at once. Delay at this point is as dangerous as during the earlier stages of management.

lleus Of the post-operative complications, ileus is the most difficult to manage. Since ileus occurs for unknown reasons, one is left with conservative management as the method of choice.

This involves suction, very careful intravenous fluid and electrolyte therapy and appropriate antibiotics. Older children with severe and persistent post-operative ileus have been successfully carried for as long as three weeks by the careful management of intravenous fluid and electrolyte therapy, but this is not possible in the small infant since his reserve capacity is much less. The gastrointestinal suction tube should be utilized with much caution whenever it is used, but particularly so in this clinical situation. The small infant is readily dehydrated, and marked acid-base imbalance develops in a few hours. It is clear that the life of the patient with this type of complication is

usually dependent on clinical insight and vigilance of management.

Infections The most common postoperative infections are pneumonia, septicemia and wound infections. The staphylococcus and the pneumococcus are the usual causative organisms of bacterial pneumonia. Appropriate antimicrobial therapy is usually effective. Septicemia is not a common complication but should be suspected whenever a patient in this age group is not doing well. A blood culture will usually reveal the bacterial cause of the septicemia and will provide information that will be helpful in the selection of proper therapy. Wound infections are not common and since the management of this entity is more a surgical than a medical problem the details will not be considered here. Probably the best general rule is to establish outside drainage when pus is present. Although an abscess can be controlled without drainage, several days longer will be necessary for adequate healing.

Whether fluid and electrolyte imbalance is caused by suction, vomiting, inadequate intake or any combination thereof, the end result is the same and is extremely dangerous. Of the patients who are diagnosed and operated early and who eventually expire, the vast majority are those who have encountered post-operative complications, not the least of which is improperly managed fluid and electrolyte therapy. Even though special knowledge and training are required, inadequate management of these problems in the present day is inexcusable.

Since pediatric surgery, as a specialty, is now barely beyond its own infancy, major advances can be expected in the future. Medical education must maintain the pace of medical advance. As the student is exposed to the normal newborn and the problems of that age group, so will the general physician be trained to recognize abnormalities and variations of normal when they occur.

A high index of suspicion, early investigation with the establishment of the diagnosis, complete surgical correction as soon thereafter as is indicated and vigilant post-operative management will be rewarded by success in a gratifying percentage of the patients treated.

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Clini-Clipping

Milk seeping from engorged breast. So-called "witch's milk," due to presence of maternal hormone transferred via the placenta. (after Anderson)



utside of himself or his family, no one has a greater interest in an employee's health than the company employing him. After all, his company wants him to be working at full capacity every day. Industry has made it possible for almost every employee to be the beneficiary of some type of health and safety program. Yet the average American family spends 4 to 5% of its yearly income for medical care and related services. The public is aware of the many advances of modern medicine. It also has found out that complete medical care is costly. Each one feels that he is entitled to the best when it affects his health. As a result, he is in favor of any plan which will provide him the best medical care at a cost he can afford to pay. Various measures have been developed in the attempt to prevent injury and disease in an industrial setting. Industrial medicine has, in most instances, restricted itself to occupational medical needs; that is, medical and surgical health problems on the job.

Management is now recognizing the value of their employee's general or non-occupational health needs, is no question that non-occupational injuries and diseases have a direct effect on production and on employee morale. In most companies non-occupational visits to the plant medical facilities are as common as occupational visits. There is a trend toward providing more preventive care to the employee. The medical department of a company is a constructive, productive part of industrial organization. It is a member of the production team, and its accomplishments in maintaining the human resources of the company are as valuable as the maintenance of costly equipment.

Executive Health

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One of the working principles of an adequate industrial medical program is the provision of pre-placement and periodic physical examinations. The preplacement physical examination is for the purpose of finding out the applicant's physical and mental condition at the time of hiring, and for placement on the proper job. It points out correcable or controllable defects to the applicant and provides a health base-line for future comparative study. It also determines to some degree the amount of health liability that the company's health and welfare insurance is assuming in hiring the applicant. It apprises the company of the new employee's physical assets and liabilities.

The most important reason for a periodic examination is that diseases and adverse trends will be discovered early, thus affording the best opportunity to keep little things little. Discovering in-

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cipient conditions early reduces the cost of health maintenance by avoiding the developing of long, costly, chronic illness. It also is a means of finding conditions among employees which could impede safe operation and good production. In lessening the amount of absence due to illness or injury, in achieving an increase in efficiency that follows the enjoyment of physical and mental good health, and in lengthening work careers by helping to prevent premature disabilities, the periodic examination pays large dividends to the company. Again, periodic examinations can be likened to the care and upkeep of machinery and equipment. The good engineer knows that preventive maintenance is cheapest in the long run.

Curative medicine deals with the horizontal patient, whereas preventive medicine keeps him vertical and productive. Physicians who take an active part in occupational medicine are engaged essentially in health protection and promotion. They believe that the enterprise and the economy that stand on production, really stand on health. Their job is becoming progressively more complex. For example, there are the stillrelatively-unexplored mental health aspects of occupational medicine. It is said that maladjusted workers cost U.S. industry over 3 billion dollars a year through job changes, alcoholism, vandalism, goldbricking, executive breakdowns, absenteeism, and other emotional difficulties. Another complication is the glaring fact that hospital and surgical insurance necessitate work absence to be effective. There are no funds available for the ambulant sick or the near sick. This promotes costly abuses on the part of some, and creates the need for policing.

In the early days of World War II many companies began to recognize for the first time that the health of a certain number of their employees, namely, the executives, was a valuable asset to be protected and conserved. It was evident that a company had a tremendous investment in each of its executives. To protect that investment it was necessary for a health maintenance program to be instituted to prevent untimely breakdowns.

Many articles have been written on the subject of executive health. Some of them, particularly newspaper articles, are frightening in their presentations; for example, "The Pace that Kills"-"Why Executives Drop Dead"-"Your Next Promotion Can Kill You"-etc. Actually, statistics indicate that the executive by and large is in no worse state of health than any other employee of the same age. Yet it would seem that a group enjoying as many material advantages as the executive should be conspicuously healthier, if for no other reason than that they have the means to afford the best medical care.

So why should particular attention be paid to the executive's health? It must be repeated that a company has no asset more precious than the good health of its employees. The death or serious illness of a key man can embarrass a company. It is poor economy for a company to have a policy of hiring healthy individuals and then forget all about them from a health standpoint. Recently, in a reported survey of the results of the comprehensive physical examination of 500 executives, an amazing 75% of those examined had abnormalities. 40% of all the findings were both unsuspected and clinically worthy of attention or correction. Subsequent

yearly examination of this group of executives showed that significant new diseases appear each year in 13 to 20% of the subjects restudied. The value of periodic executive physical examinations has become so self-evident that over 50% of all American companies now have an executive health maintenance program: the larger the company. usually the more comprehensive the program. The vast majority of these executive health programs are on a periodic basis—usually annually—with special provisions for more frequent examination of older employees, and less frequent for younger men.

Some companies give periodic physical examinations to executives and employees alike. However, most differentiate between the kind of examinations given. The line may be drawn at top management, middle management or at the supervisory level. Some firms include everyone earning above a certain salary. Some have examinations for all employees, but more comprehensive ones for executives. Age or physical condition is a determining factor in eligibility in some plants.

Opinion varies widely as to whether or not the examination should be compulsory. Many industrial physicians feel that it should be. When it is left optional, the very men who need it the most will not be examined. The man who is afraid that the findings may be serious stays away because he does not want to know about himself, or because he is afraid that the report will get back to management and affect his job. It must be recognized that if the examination is compulsory, some employees are resentful and less frank, or are less liable to follow the recommendations of the examining physician. In any compulsory examination plan, it should be remembered that there are a few people who are religiously against physical examinations, and others who are already under medical care and do not need the examination. Those physicians who believe that the examination should be voluntary, at the same time feel that participation should be strongly encouraged by management. It is interesting to note that a recent survey showed that of all executives who were offered periodic health examinations, over 90% participated.

Usually the full cost of the examination program is paid for by the company. Some companies pay for all of the examination if it is done by physicians or clinics of the company's choice, and only part or none of it if the individual goes to his own physician. Some companies set up certain top limits of payment, and the employee pays for any additional costs.

A health examination may be handled by the company physician in the company medical department, or it may be performed by an outside physician or clinic designated by the company, or by a physician or clinic chosen by the executive himself. In my opinion, an ideal set-up is for the executive to be examined in the company medical facilities by the company physician for two consecutive years, and the third year to be examined at some designated outside clinic. This offers an opportunity for checking on the company medical facilities and personnel, and is an added safeguard for insuring a good job being done on the executive. It must be remembered that a physical examination is no better than the personnel giving it and the efficiency of the equipment used. A number of resort-like clinics have been

created during the past several years. These are popular because of the prestige and privacy they offer, as well as providing a nice trip and a few days' vacation in a luxurious setting. Company medical facilities are much more convenient, and in large companies the same examination can be given much cheaper. This is particularly true when the value of the executive's time is considered. And, of course, it should be added that if the medical department is good enough for other employees, it should be good enough for the top men. Company physicians are in a better position to know the executive and the special conditions of his work. Therefore, they may be better able to advise him. An important aspect of any medical examination is the follow-up of it. This, too, can be done more easily by the company medical personnel. If by chance the executive becomes ill, not only are the medical records more readily available, but the physician who has recently examined him also is available for consultation with the executive's attending physician. Unfortunately, some executives avoid company medical facilities on the ground that they have no faith in the examiners, or that they are afraid the results will not be kept confidential. If either of these conditions exist, it would seem to be an indictment of the executive for permitting them to continue to exist in his company.

The question of confidentiality is an important one. Most companies insist that the report of the physical examination be given directly to the executive himself. If the examination is done by an outside clinic, the medical director of the company also should be made aware of the results. When a serious condition is found which, in the mind of the medi-

cal director, warrants making management aware of it, permission is asked of the examinee to discuss the report in his presence with an immediate superior. If it is to be company policy that the immediate superior is to be made aware of the results of all physical examinations, then permission should be obtained in writing from the person being examined before the examination is begun. Most companies (and properly so, I believe) rely upon the executive to confide to his superiors any serious conditions which are discovered and might adversely affect his future or that of the company. After all, it must be remembered that basically, the health of an individual is his own problem.

To be effective, a physical examination program must be conducted in such a manner that it will promote maximum health for all who are examined. This cannot be achieved if the person being examined does not have confidence in the program and the manner in which it is being administered. The medical department's responsibility is to perform the best examination that it can with its available facilities and personnel. But it must be remembered that it is possible for a "heart attack" to occur within a short period after an examination indicates that everything looked normal, Actually, the prime purpose of an examination is to keep the individual healthy and to help him with remediable problems; not to predict what will happen to him. You do not give a person health, you merely help him find it. It can be assumed for the most part that an individual who is found to be normal for his age and sex can hope to attain the maximum life expectancy.

How extensive a physical examination is to be, is dependent on what the com-

pany feels that it can spend for the program. It is better to examine fewer numbers well than larger numbers poorly. A superficial examination is worse than none at all. It gives more or less assurance and discourages the subject from seeking more thorough medical advice. A complete medical history and a physical inspection should be included. An x-ray or fluoroscopic examination of the chest, an electrocardiogram, a complete blood count and urine analysis are all necessary. Rectal and prostatic examinations are musts, fasting blood sugar and other laboratory tests are valuable adjuncts. X-rays of the gastro-intestinal tract are helpful. especially in the finding of early cancer; and some attempt should be made to evaluate the mental and emotional health of the employee. Individual success in industry can be measured by a man's frustration tolerance. The study of the emotional and mental state of a person is a most important part of any examination. In most cases this is done by the examining physician at the time of the examination. The examining physician must be a good listener; a non-critical, tolerant, patient soul, Psychological tests can be included as part of the executive health maintenance program. At the time of the examination the physician should discuss such topics as overwork, amount of overtime and whether or not vacations are taken. He should try to ascertain whether the executive works under any special strain, or whether he has some special emotional problem. The exasperations and frustrations of dealing with unions, government, and other employees cause stresses which are reflected in the general health of the executive. There is no question that most executives achieve their suc-

cess at considerable personal cost. Probably there is no difference between the emotional problems of the manager and of the people working for him. While the problems may be different, each one is of major importance to the individual and probably affects him in the same manner. It must be recognized that to some degree the present day executive represents a survival of the fittest. He has learned to take the strains in stride. In the executive as in everyone else, family problems tend to out-number job problems; and sometimes the signs of stress and strain are caused by maladjustment rather than by overwork. It is always interesting to note that when the boss has a problem, his subordinates have more problems than average. It is so true that a "sick boss" can make a whole organization unhappy. This is probably as good a reason as any for executive health maintenance.

Some people resist having a physical examination on the basis that they feel good, that there is not a thing wrong with them, that it is a waste of time, or that they have better things to do. Actually, a feeling of good or bad health is not a reliable indication of one's actual physical condition. Many serious ailments such as cancer or beginning heart disease do not cause symptoms until the condition is well on its way, while many of our complaints have little significance.

Executive examinations have proven their value to industry through improved efficiency and improved morale, the saving of many lives by early discovery of otherwise fatal conditions, and the prolonging of lives of others by urging medical care for remedial defects. Year after year, successive examinations uncover important and previously undiagnosed disorders.

From a purely monetary point of view, the executive represents a tremendous cash investment. Merely recruiting a college graduate for executive training costs thousands of dollars. Replacing a top executive costs much more. Ill health can cause wrong decisions to be made, resulting in considerable expense to the company. If the executive is off sick and not present to make a crucial decision, the cost can be even greater.

A good health program pays for itself many times over by averting such losses.

The health of the individual and of the community has become a matter of primary concern to everyone. Both management and union representatives recognize the importance of this phase of our country's economy, and they are doing something about it. The current drive for increasingly comprehensive health care programs can be beneficial only if it is well directed: uncontrolled, it can be disastrous. Not only would demands for excessive coverage be costly, but would also cause people to ignore the basic requirements of health care and to misuse hospital and medical facilities by occupying them when they are not actually required. All of this would increase the cost of doing business, lead to further inflation, and higher taxes.

A challenging frontier of opportunity lies directly ahead of both industrial management and industrial medicine in meeting the health needs of our nation. Remember, the cost of medical care is sky-rocketing. There are two sure ways to help control medical costs. One is to improve the health status of the working population. The other is to introduce more business-like methods into the practice of medicine. Employee health really is not a "fringe benefit," but rather is an integral part of successful company operations.

Referring a Patient to a Psychiatrist

Sending any patient on to another physician, no matter what the other doctor's specialty may be, is a delicate process, and one which must be handled with a keen appreciation of the patient's feelings. The patient inevitably wonders -"Is he angry with me?"-"Doesn't he want me for a patient anymore?"-"Do I have something he's afraid to tell me about?"-etc. And certain of the more suspicious ones may even cover this fear with vague mumblings about "fee-splitting" or being "given the run-around." Sending a patient to a psychiatric physician involves all these problems, and a few special ones, in addition. The doctor who learns to refer his emotionally disturbed patients with real appreciation for their feelings will be readily able to handle his other referral problems to non-psychiatric colleagues.

Let's consider a number of examples of everyday problems you may wish to send on to your psychiatric colleagues:

A well-oriented, intelligent and cooperative person comes to you because of somatic complaints. Subsequent study reveals these are emotionally determined, at least in large measure, and you wish to refer him to a psychiatrist

for actual psychiatric therapy. A good referral with this sort of patient starts with your first contact. A great deal depends on how you take the history, how you listen. A doctor who compulsively asks a large number of rote questions and shuts the patient off, allowing only for yes and no answers, fails to establish the adequate doctor-patient relationship which makes for a satisfactory referral. Further, a doctor who sets out to prove an organic etiology for the patient's complaints, who doesn't listen to the patient's story when it doesn't have an organic ring, is in hot water when the physical and laboratory studies are negative. He then has to back-track, admit by implication he was wrong, that really this is an illness with many emotional roots. Thus, from the first the wise physician listens, and when the patient begins to talk about his in-laws' demands, or his wife's complaints, or his own feelings of discouragement, the doctor listens and doesn't cut him off. This may be of more importance than

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the color, consistency and number of stools. Then the doctor is not left in the embarrassing situation of trying to prove gallbladder disease, for example, only to find out that there is no gallbladder disease.

Then as a result of (1) your medical impression based on history, physical examination and laboratory studies, and (2) your evaluation of the emotional factors involved, you decide this is a problem best handled by a psychiatrist. How then to get this across to the patient in an understandable way, and in a manner that he is most likely to accept psychiatric help? The following points will be helpful:

If you have established a good relationship with the patient, have listened to his story, you may have a number of leads that can be helpful in starting. For example: "Mr. Jones, as far as my examinations and tests are concerned, your heart is healthy. I've been wondering whether the fear you have been experiencing at night that we have talked about has been the cause of the heart symptoms?" At which point the patient might reply, "Maybe so, but I don't know what I'm afraid of." This, then, may be the time to bring up psychiatric referral. It can be done as follows: "This may be something I can't help you with-it's not within my training and experience. This is something a psychiatrist might be able to help you with. As you know, psychiatrists are physicians like myself, but who have specialized in helping people with emotional problems." At this point you may well stop and give him an opportunity to air the many feelings he likely has about psychiatrists and about you for suggesting one. Such questions and concerns as follows may be present, should

be looked for, and often even verbalized for the patient, if he doesn't bring them out himself:

- a) Do you think I'm crazy, nuts, etc.?
- b) Are you trying to get rid of me?
- c) Are you still interested in helping me?
- d) What would a psychiatrist do with me?
- e) What will it cost? Aren't the fees very high?
- f) What will people think? How can I tell my wife about it?
- g) How can I contact a psychiatrist? Who would you suggest?

At this point you, the physician, may ask why is all this necessary? Why not just say - "Mr. Jones, your problem is not organic, your heart is okay. I think you have a functional heart condition and should see a psychiatrist." First he's not going entirely to understand vou. The difference between "functional" and "organic" is not always clear to a layman (and in this he may be correctly confused). Furthermore, he may become very angry at you and feel that you are "sluffing" him. Even if he remains politely civil, he is likely not to take your suggestion-but to go on to another general practitioner, internist, or cardiologist. And thus begins a long series of expensive, fruitless medical shopping, often leading to the chiropractor's table, where some temporary relief may be obtained from the attention and reassurance.

Now what to do with the patient who agrees that "maybe it is my nerves, doctor," but who wants more tests? Generally, it is well to view such requests as a defense against the fears of his emotional difficulties and doing something about them. By and large it is well not to give in to such requests.

Actually, you won't be referring him for such treatment unless you have completed all procedures medically necessary. Excessive procedures are either due to the doctor's own insecurity or his guilts and fears about sending a patient to a psychiatrist for care or because it's easier to keep the patient satisfied and be a "good guy." How to handle these requests? Help the patient with his feelings toward psychiatric referral, as already noted, and reassure him of your willingness to continue to see him for any medical illness or questions in the future.

Now for the problem of the patient who refuses such referral. Here again an attempt should be made to help him with his fears, as we have already noted. If this is unsuccessful, don't try to force the patient. If you do, one of two things happens: He becomes hostile, rejecting you as well as your ability to help him in the future or he may take your strong push and go to the psychiatrist and arrive hostile and unable to be helped. In the case of the reluctant referral what does the doctor do? He indicates a willingness to continue to see the patient but firmly, yet kindly, refuses further tests and unnecessary medication. If the recalcitrant referral is thus handled, he may at some future time be able to see or ask to see a psychiatrist - and be able and willing to accept help. (At this point it should be added that you may well wish to handle many of your chronic hypochondriacs yourself and not refer them. In this case the giving of certain medications, under controlled circumstances may be very helpful as part of your long-term management of such chronic, hypochondriacal persons. For this special problem, I refer you to excellent articles by Lyon1 and Busse.2)

Certain other type-problems should be considered. Many patients represent diagnostic problems about which you wish an opinion from a psychiatrist. These are sent for consultative evaluation, not treatment. The largest percentage of consultations in many large general hospitals are of this nature. Here again considerable time may have to be spent with the patient helping him to accept this as a necessary procedure. If this is not done, he may arrive in our offices too upset and hostile to be evaluated. Thus, the real worth of the consultation may be lost. Always tell the patient he's going to a psychiatrist. Use that term. Don't say "neurologist," "nerve specialist," "another doctor down the hall," etc. Patients can tell very, very soon. Even if we wanted to, which we don't, this could not be kept a secret. The patient sent to a psychiatrist without being told becomes angry at the psychiatrist but doubly so at referring doctor. He loses respect for the referring doctor, feeling he lacks the "guts" to tell him where he is being referred.

Then we have psychotic patients whom you need to have evaluated, particularly for psychiatric hospitalization, and whom you believe would refuse to see a psychiatrist if they knew. Here again you shouldn't send the patient without telling him. These problems are often best handled by calling the psychiatrist first and seeking his suggestions. After all, that's part of the psychiatrist's business and within his sphere of specialized knowledge-how to advise you and the family in handling of such psychotic problems. Usually they are difficult and can best be handled with the advice of the psychiatrist and the full cooperation and knowledge of the patient's family.

Summary

1. A good referral is only possible when a good doctor-patient relationship exists. Thus a good referral begins when you, as referring doctor, first contact the patient.

A good referral is never done in an authoritarian, dogmatic manner, without consideration of the patient's feelings.

3. A good referral is often the sine qua non for the psychiatrist being able to help the patient. Thus whether we as psychiatrists succeed in our treatment of the patient depends very greatly on the manner in which he is referred.

2200 McCov St.

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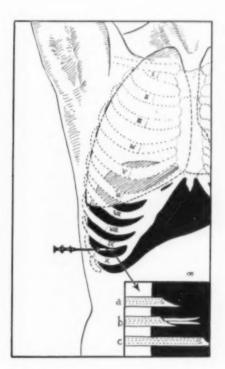
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Clini-Clipping

Technic of obtaining biopsy specimen with a Vim-Silverman needle.

- a. The inner needle is retracted until the liver is entered.
- c. The inner needle is advanced when the liver is entered.
- c. The outer needle is advanced to cover the inner needle and protect the cut tissue, then the whole instrument is withdrawn.



Exfoliative Cytology

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The refinement of the techniques for study of exfoliated cells together with the publicity accorded it in many scientific as well as popular magazines has resulted in a marked increase in the use of this very reliable method for detection of cancer. This applies particularly to cancer of the cervix, though other body secretions and excretions are frequently examined for malignant cells. The latter are not so consistently accurate as exfoliated cells from the genital tract of women, but occasionally does give positive results, particularly cells from pleural and peritoneal fluids.

Since the test has been widely publicized, it has become necessary for a physician to consider cytological studies in his general practice. Economically mass surveys would appear to be somewhat unsound, not only from the standpoint of the cost to patients, but also the time consumed by the cytologist or pathologist and the clinician. As in all

other tests, a study of the smear obtained from the vaginal secretion is only a part of an examination, and women receiving a cytological study should by all means have a complete pelvic survey. A study of the exfoliated cells from the vaginal secretion alone would be comparable to a study of the sputum for tuberculosis without obtaining a history, physical examination and X-ray study of the chest. It would be completely inadequate to exclude tuberculosis on this basis alone. Such a study of secretions alone would tend to rule out only one disease of the pelvic organs while a thorough study might reveal some other condition which could be as disabling as well as disastrous to the patient. The cost to the patient or agency sponsoring a general survey would include the time consumed by the physician in doing a complete pelvic examination as well as obtaining a smear. The cost of a study by the examining physician would be greater than that of the cytologist and the cost to the public would be in millions of dollars per year. While such an ambitious program would be well worth while, there are insufficient physicians and cytologists to realize its proper consummation. Realizing the tremendous cost to the patient as well as the time consumed by all physicians concerned, it becomes necessary for one to be somewhat selective in choosing cases for these studies.

Because of general knowledge of this type of examination and upon insistence of friends and relatives, many women come to a physician purely for the purpose of a cytological study. They do not have in mind a complete examination and feel that if the smear is made and sent to a cytologist, no further

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Investigation is required. However, in these cases it is mandatory that the physician insist upon taking a history as well as doing a complete pelvic examination as there are many other diseases which might be more inimical to the patient's health and welfare. Growing fibroids, old pelvic inflammatory disease, ovarian cysts, or malignant or benign neoplasms of the remainder of the pelvic organs outside of the cervix and endometrium might be discovered. Though a great proportion of the smears are negative, occasionally a case of early cancer of the cervix is brought to light, which is completely unsuspected and tends to support the feeling that routine examinations might be desirable.

Case History 1 A white woman, 34 years of age, went to her physician for a cytological study. A friend who had this test done and was found to have an early carcinoma of the cervix had been insisting that this patient should also be examined. There was no history of a discharge or contact bleeding and the physician found she had a perfectly smooth cervical mucosa with no gross abnormalities and no discharge or bleeding on touching the cervix. However, her smear returned positive for cancer cells. A repeated smear was likewise positive. A biopsy subsequently done showed a carcinoma of the cervix with early cervical gland invasion.

This is illustrative of one of many cases in which an examination brought to light a carcinoma of the cervix early enough for adequate treatment to be instituted, presumably in time to cure the patient. One is unable to state how long this cancer had been present, or if the carcinoma would ever have clinically manifested itself. Many feel that

these in-situ cancers may be present years before clinical symptoms occur, and in fact there is good evidence that many cancers in the past have been cured by cauterization or conization. This patient is well and without evidence of recurrence five years after her original biopsy.

The second group of patients requiring a cytological study are those women returning to the physician periodically for a general checkup. These patients are usually older, and begin their yearly examinations around 40 or 45 years of age, perhaps when menopausal symptoms occur. The following case illustrates the desirability for rechecking this type of patient at specified intervals.

Case History 2 A woman 52 years of age had been going to her physician for a yearly check up for the past five years. At each examination a cytological study was made and at the end of three years some atypical cells, not definitely neoplastic, were discovered. More frequent cytological studies were instituted at periods of three to six month intervals, and at the end of slightly over a year and a half, sufficient abnormal cells suggesting a cancer were found to justify cervical biopsy study. This was done and an early carcinoma in-situ was discovered.

The finding of an occasional case with an early developing carcinoma in this particular group makes it desirable to include a cytological study with each periodic examination of female patients.

Another group of patients are those going to their physicians with definite pelvic symptoms. Regardless of the age of the patient, a cytological study is very important. Even though the symptoms may refer to uterine prolapse, vaginal discharge, whether bloody or not or purely a menstrual disorder, examination of exfoliated cells as an adjunct to the pelvic survey is advisable. The following case illustrates a possible finding in this type of patient.

Case History 3 A 26-year-old woman went to her physician because of pain during menstruation. This patient had been married since the age of 16, and had three children 9, 7 and 6 years of age respectively. A routine smear was reported as positive for cancer cells and biopsy was recommended. Multiple biopsies were done and a carcinoma in-situ was discovered. As she had three children, it was decided to do a hysterectomy in spite of the patient's age. A carcinoma of the cervix with invasion of cervical glands was found.

Another type of patient in which cytological study is indicated is a woman with a sterility problem. While these patients most frequently do not have too great a concern about the presence of cancer, rarely one is discovered with an early carcinoma in-situ. The following case represents such a patient.

Case History 4 A 32-year-old woman had been married for several years without having become pregnant. As she and her husband were very anxious to have children, she went to her physician who found nothing particularly wrong grossly with the pelvic organs. An examination of the semen of her mate gave no clue to the cause of the sterility. During the course of the pelvic examination, a routine smear was obtained, and this was reported as positive for carcinoma. As biopsy was positive, a hysterectomy was decided upon. The pathology report following the hysterectomy was carcinoma of the

cervix with cervical gland invasion.

The last group are those women who are examined by their physician during pregnancy. While it is generally conceded that pregnancy sometimes results in an atypical hyperplasia indistinguishable from that of cancer, no one is sure that the atypical cells when found both in the smear and in subsequent biopsy, is not actually cancer activated somewhat by the pregnancy. The patient, if left alone, may or may not develop clinical cancer. The following case illustrates this adequately.

Case History 5 A woman, 28 years of age, with one living child visited her physician for prenatal care. In the routine examination, a cervical smear was done and reported positive for cancer cells. Punch biopsies done in the office showed a carcinoma in-situ. As the patient was well along in pregnancy and since they were very desirous of having this child, it was decided to carry her through to term. Following delivery further smears and biopsies were done at intervals. These remained positive for several months after delivery. There was an extensive carcinoma in-situ found on pathologic study of the cervix after vaginal hysterectomy.

While the above patient demonstrates that carcinoma of the cervix can occur in pregnancy, it may be entirely safe to carry the patient through a pregnancy unless actual invasion of the stroma is found at the time of biopsy. We have two patients, however, who three months following delivery failed to show any more atypical cells and biopsies consistantly have been negative. No further treatment has been given these patients, but it is necessary to continue following them for some time.

Many methods have been advocated

by different investigators for the procedure of obtaining smears, all of which have some faults and some advantages. The original method of Papanicolaou of studying the secretion in the vaginal pool is excellent, though it gives less concentration of cancer cells and in many instances the cytology is obscured by leukocytes, mucus and bacteria.

Many women will invariably take a douche before going to a physician for a pelvic examination, even when properly instructed. This, of course, cleans out the exfoliated cells and gives less chance of a positive result. However, it still remains a very desirable method, particularly in women past the menopause. In these cases exfoliation from the uterus, though less accurate, may reveal a carcinoma of the endometrium.

Other methods, including scraping by a dull instrument and the sponge method tend to collect large groups of endocervical cells which makes the interpretation somewhat difficult. We use one of two methods; the first being an ordinary cotton applicator obtaining the cells from the junctional zone. This also may be accompanied by a smear from the cervical canal or the vaginal secretion or both. A method used by one physician is to pass the speculum with the minimal amount of lubricant and by use of a tongue depressor press the cervix and obtain the secretions on the tip of the blades of the speculum from which smears are made. This has been very satisfactory. However, it, like others has its drawbacks as mucus obtained from the endocervical canal often obscures the cytology.

The number of smears taken is more or less immaterial and depends on the age and frequency of study. For women from thirty years of age to the menopause, after the initial examination at which time the two smears, one from the vaginal vault and one from the cervix should be obtained, only one smear is necessary. Detection of a carcinoma of the endometrium, which is rare in this age group, and of the adnexa is very remote. In almost all cases malignant cells from the cervix will be found on all smears and study of multiple slides is superfluous. It is time consuming and only in a rare case adds information not shown in one smear.

After the menopause and particularly if there is a history of bloody discharge, two or more smears may be necessary. Endometrial carcinoma is more common in the post-menopausal age and consequently, though rare to pick it up by cytological examination, it is advisable to obtain vaginal secretion or endocervical plugs.

There are many methods of reporting the results of the study of the smears. Some report only as negative, suspicious and positive, adding a comment as to his interpretation of the cells and whether he feels they are benign or malignant. In my own estimation, this is the desirable method. However, we use the five classifications suggested by Papanicolaou, which is somewhat burdensome and difficult to interpret by the physician. Class two could be completely eliminated as it is confusing and leaves the clinician in an awkward position in his explanation to the patient. Class four and five are identical, each requiring a biopsy for determination of invasion. Consequently, class two and four could be easily dropped from the classification.

Both the method of collecting the material and the reporting of results require a complete understanding between the submitting physician and the cytologist. The report of the results of cytological study as well as the future management of the case should be predicated entirely on a consultation basis between the pathologist or cytologist and the clinician as in many instances cases seemingly identical might be handled

differently. The case of a relatively young person with a family already established might be treated differently from a woman wishing she had children but showing evidence of in-situ cancer. If pregnancy is present, most certainly it should continue to term unless invasion is evident.

Summary

 Mass surveys, except for statistical studies, are expensive and impractical.

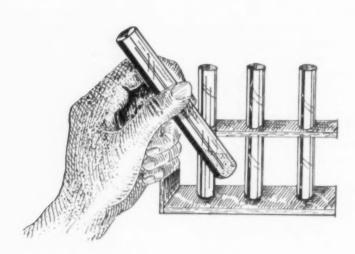
Selection of cases by the clinician is mandatory to conserve his and the cytologist's time as well as the finances of the public.

3. Cases are given illustrating

possible findings in different groups of patients.

 The method used in obtaining smears and reporting results depends on personal consultation between the clinician and cytologist.

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Systemic Reaction and Injection of Allergen

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Physicians acknowledge the various types of systemic (constitutional) reactions that may occur in patients injected with allergenic substances. With the increasing use of new drugs and antibiotic preparations, the incidence of systemic reactions in recent times has naturally increased. It therefore becomes necessary to be alerted to the occurrences of such reactions, especially of the milder types.

Systemic reactions may be recorded as immediate, accelerated, and delayed. However, according to Schick1, all reactions following injections are regarded as delayed or prolonged immediate reactions. He has stated that in serum sickness, a systemic reaction may be almost immediate only in the case of an intentional or accidental intravenous injection of antigen. The delayed reaction after a subcutaneous or intramuscular injection may appear only after a shorter (accelerated) or longer (prolonged) incubation period. It is important to note that a positive tuberculin test which is read in 48 hours and again in 7 days is classified as a delayed or prolonged immediate reaction. However, it may be stressed that allergists use time as the criterion for the classification of systemic reactions following vaccination with viable and non-viable substances.

The reaction response which follows an injection of antigen or allergen in the hypersensitive individual may be one of three types:

- the immediate reaction which occurs from one to thirty minutes after an injection
- an accelerated reaction, from onehalf hour to three hours after an injection
- a delayed reaction which occurs from three to twenty-four hours after an injection.

The immediate or accelerated reactions are more readily apparent to both the attending physician and patient and appropriate measures for their immediate control are instituted. However, delayed reactions of the more prolonged type are frequently unrecognized. They

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are milder and of relatively less importance as compared to those reactions occurring up to three hours after the injection.

Hyposensitization to pollen and other allergies constitute the major portion of the physicians' injection experience. It is then not surprising that most of the reactions encountered are associated with allergen immunization injections. Systemic reactions, however, may follow any injectable substance.

When a large hot local reaction is present at the site of the injection, it is easier for the physician to relate the delayed systemic reaction to the injected substance.

However, it is of importance to note that in certain instances a delayed systemic reaction may be experienced by the patient, without a local reaction at the site of the injection. These observations serve as practical guides in the immunization treatment of allergic disease.

The shock tissues most frequently involved when delayed reactions occur are the nose, the bronchi, and the skin. Sneezing and/or excessive lacrimation, asthma, urticaria, and angioedema may be observed. In some cases, however, the gastrointestinal tract reacts with pain (spasm), nausea, vomiting, or diarrhea with or without bleeding.

Ofttimes, the only manifestations of the systemic reaction will be a mild or pronounced spasmodic cough occurring from 12 to 24 hours after the injection. This may follow serum therapy but is more commonly noted with an autogenous or a stock mixed bacterial vaccine. In other cases, a delayed systemic reaction several hours after an injection is reported by the patient as "not being well," (chilliness, achiness, and lassitude). These symptoms may persist for periods up to twelve hours.

Occasionally, an elevation of one to two degrees in temperature, several hours after an injection may be the sole indication of a systemic reaction. The patient may be entirely unaware of this the first time it happens but its recurrence is usually recognized by the unusual feeling of body warmth or a transient blush of the skin. In still other instances, headache or reddening of the conjunctivae and sclerae represents the only manifestations of intolerance. Any of the above symptoms may be present collectively or in various combinations. Rappaport² described delayed "constitutional" reactions occurring from one to twelve hours after innoculation consisting of headache, nausea, occasional vomiting, achiness, chilliness, malaise, and a temperature rise of one or two degrees. However, he commented that the local swelling at the site of injection is always large. This observation has been amply confirmed by many others. It must be reiterated that any or all of these delayed reactions may occur not only in association with a large local reaction, which, of course, helps to simplify the causal relationships with reactions, but also such reactions may also take place with a complete absence of any irritation whatsoever at the local site.

Frequently, an injection per se in some individuals may be so disturbing to them on an emotional level, that some response may be noted and classified inaccurately as a reaction due to the injected substance. On the other hand, a patient may be getting several different injections at the same visit and it is desired to narrow down and isolate the specific offender. A simple device

available to all physicians is to substitute physiological saline solution for the suspected offending injection material. Great care must be exercised that the patient be unaware of this experiment. Of course, all practicing physicians are familiar with the fact that despite the attitude of casualness with which a patient frequently accepts an injection, the patient is on guard and watching closely whatever treatment is given to him.

The physician treating these patients can only reconstruct the sequence of events by careful and persistent questioning. The need for this is clear since some patients feel that some reaction is expected and unimportant, and so they do not want to bother their doctor with minor details.

Any discussion of delayed reaction would be incomplete unless the serum sickness reaction first described so clearly by Pirquet and Schick¹ were mentioned. This was the earliest type of delayed reaction which was well documented in the medical literature.

Reactions labeled as toxic reactions have been described in the medical literature. These have been reported as either being specifically related as an after-effect of an injection or have a wholly unrelated etiology in that they may occur coincidentally with the onset of some unusual body manifestation. If the systemic reaction is directly traceable to the injection, then such a reaction should be termed a delayed reaction. If, however, this reaction is accidentally related, the term, toxic reaction, should be abandoned.

Another form of delayed reaction is the "irritative reaction" reported by Peshkin⁴. These irritative reactions indicate symptoms of either nasal or bronchial allergy, or both, more or less continual, with no definite time relationship to the injections themselves. These irritative reactions have been described principally in connection with the perennial pollen injection treatment of allergic individuals and are especially noted in adults. The symptoms of these irritative reactions clear after the injections responsible for them are discontinued.

It is important that all types of delayed systemic (constitutional) reactions be recognized and properly classified. They are always troublesome and undermine the feeling of mutual confidence for both the physician and his patient. Even if the reaction is mild the patient's capacity to accept increasing doses is often limited in some way and the final dosage level attained may be much below that which could have been achieved if the systemic reaction could have been avoided. At times these reactions, even if innocuous, frighten patients to the extent of causing them to completely avoid all immunization treatment. If the danger signals of systemic reactions are ignored, and injection treatment with an increased dosage be given, then either an immediate or enhanced accelerated systemic reaction must be entertained along with a heightened element of risk. Within recent years, some fatalities have been reported, particularly with the use of specific allergenic substances.5

Conclusion

The different types of immediate systemic reactions associated

with large local reactions at the site of injection are the easily recog-

nized reactions and are well established. What is not so generally well known and which is of practical, as well as academic importance, is the occurrence of a negative local reaction and a prolonged delayed systemic reaction. The latter phenomenon is more commonly observed in patients with negative cutaneous pollen tests and who are undergoing specific hyposensitization. It is only in this group of patients that dosage can be leisurely raised to the "protective ceiling level" without subsequent systemic reactions.

Regardless of the type and duration of systemic reactions encountered, the repetition of these reactions can be avoided only through careful and continual observation of the patient and the experience in treatment of the physician.

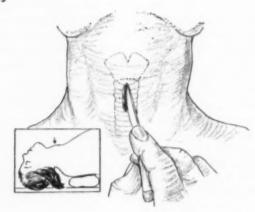
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14 Olmsted Road

Clini-Clipping



Emergency tracheostomy with pen knife. Insert shows operating position. Head is dropped by elevating the shoulders.

vision, came complaining of headache on close work and utter inability to read at all. He could read with a glass for a person ten years older than he was. He stopped his cigarettes short, and in less than three weeks all of his headaches were gone and he read as well as anyone without a glass.

We see this condition so often among

Tobacco Amblyopia

H. S. HEDGES, M.D. Charlottesville, Virginia

A MID all the heated controversy as to the relation between lung cancer and cigarettes, I find practically nothing about the damage to eyesight; but frankly, if the findings in my small-town practice are any indication of the possible results to our smokers all over the country, there must be thousands of men (and women too) who are on the way to Industrial Blindness if they keep on long enough.

Of course, we all know that thousands and thousands of people smoke all their lives with no apparent trouble except the formation of a vicious drug addiction, which is very hard to overcome. Not long ago a big strong man came into my office with the story that "when driving, often everything goes black before me." His eyes showed typical, early tobacco trouble, and I begged him to stop smoking. He came in again a few days ago telling me, "It was the hardest thing I ever had to do, but I haven't had a blackout since."

In these tobacco eyes, the first symptom is usually premature presbyopia. A strong man of 38, with perfect distant

our women. They have not been smoking long enough to have developed the late nerve changes, but the premature presbyopia is my concern. Nearly all of them also complain of cold finger tips in the morning after the first cigarette. In many of these women, if you get them quite early in the morning, place a delicate thermometer between the finger tips, let them smoke one cigarette. and you can measure a definite fall of temperature, Among many, the flow of blood in the arterioles will fall 30 per cent; in men, about 10 per cent; and please tell me, if the arterioles of the fingers are so affected, why cannot the little vessels of the heart show the same trouble? I am told that they are controlled by a different nerve supply.

The next commonest symptom is a central loss of red and green. The test is easily made. Fix a deep red circle about one-fourth of an inch in diameter on the end of a small rod. Sit facing your patient about four feet away, close one of his eyes, and with the other let him look straight into one of yours. Now, move the little circle slowly before

his eye as he fixes yours. If the color fades in the very center of the field but remains clear in the periphery, you may be sure that trouble is starting; and later on, all central red and green will be lost. By the time this has come about, the central distant vision is failing fast; and in some, it will be down to 20/200 (industrial blindness). Very marked changes will have developed in the nerve head, the whole of this area carrying the papillomacular bundle becoming a dirty grey. Fortunately, however, if these patients will really stop all use of tobacco, most of them will make an excellent recovery.

This spring a cigarette smoker came in, the picture of despair, a man about 50 who had been a truck driver. "Doctor, my eyes have failed so that I have lost my job, I can't see well enough to do any work, I have a family to care for, and I have nothing."

Vision 20/200, unimproved with glasses (industrial blindness). To make a long story short, he had typical tobacco eyes. I begged him to stop his cigarettes, and he said he would. He came in again a few weeks ago—the happiest looking man I have seen in a long time. "Doctor, my sight has all come back" (it

tested normal), "and I have the best job I ever had."

We could give you dozens of case reports, but the best description of tobacco amblyopia that I know of is found in Dr. De Schweinitz' "Toxic Amblyopia," published by Lea Bros., in 1896. The earliest I can find is by Beer, 1792, and the next by the great Scotch MacKenzie in 1832. So, you see, the trouble has been known for a long time, but many still know nothing about it. One of the scientists on the Tobacco Investigating Committee wrote me he "had never heard of such a thing!"

As to the much publicized filters, while some of them doubtless remove some of the tar, they have very little effect on the unburned nicotine in the smoke. Nicotine, however, is very soluble in water, so one brand carries a damp sponge. The water in this will absorb most of the nicotine. I had a patient who needed to stop smoking, but would not; so I bought him a pack of the above type, Result: "I might as well not smoke at all." It is the nicotine that the old addict craves, and only a cigarette carrying the full percentage of the drug will or can "satisfy." 104 East Market Street

MARTIN D. LIEMER, M.D. New York, New York first revealed the chemical and physical properties of this pigment and named it hematoporphyrin. By 1892, Garrod, in a review, noted the demonstration of hematotorphyrin in the urine of healthy persons in small amounts, and in large amounts in the presence of various diseases. In 1911, Gunther defined it as an error of pigment metabolism and de-

The Clinical Nature of Acute Intermittent Porphyria

Porphyria is defined by Watson^{1,2} as a "peculiar constitutional fault or 'inborn error' in porphyrin metabolism characterized by marked over-production of uroporphyrin and related substances." Yet it is uncertain "whether such overproduction always represents a constitutional disturbance or whether in rare instances it may appear as a sequel to some other disease, such as an infectious or toxic state."

In recent years the medical literature has contained an increasing number of references to the porphyrinopathies and much has been added to our knowledge of these obscure entities. It has become apparent that although relatively uncommon, they are by no means the rare avis they were once considered to be. However, all authors stress that a strong "Index of Awareness" is essential to make the diagnosis. To this end the clinical aspects are presented.

History³ In 1841, Sherer described a red pigment formed by the action of strong sulfuric acid on hemoglobin, but it was not until 1871 that Hoppe Seyler

scribed it as a clinical entity, having noted patients who excreted so much red pigment that the urine was colored. Fisher in 1924, first isolated coproporphyrin and uroporphyrin in the urine of patients with acute porphyria and noted that they never excrete hematoporphyrin, which is a laboratory product and never occurs in nature. Later he synthesized the prophyrin ring in his laboratory in the form of protoporphyrin, the porphyrin of the hemoglobin molecule. Since the extensive review of porphyria by Mason, Courville and Ziskind⁴ in 1933 and Waldenstrom's⁵ classic description of the acute disease in 1937, there have been many advances in the biochemistry of the porphyrins coming in large part from the laboratories of C. J. Watson and Rimington.

Chemistry of the Porphyrins
The porphyrins are pigments composed
of a ring structure of four pyrrol nuclei,
connected by four methene bridges and
differ by virtue of the side chains attached to the eight free corners of the
pyroll nuclei, These rings complex with

metals and proteins to form the respiratory pigments. A tentative simplified scheme of the biosynthesis of porphyrin in man is outlined by Kark:⁶ (See chart below)

Large amounts of type III porphyrin are synthesized in the body to provide prosthetic groups for the respiratory enzymes, but only small quantities are excreted. Type I prophyrins are produced in small amounts as side products of this synthesis and are largely excreted. In porphria abnormal amounts and kinds of these porphyrins are excreted in urine and feces and include coproporphyrin Type I and II, uroporphyrin I. Waldenstrom uroporphyrin and prophobilinogen (which unlike the others is colorless and non-fluorescent). For extensive reviews of the high complex and still poorly understood biochemistry the reader is referred to Watson,2,7 Watson and Larson,8 Dobriner

and Rhoads, Mason and Associates, Waldenstrom,

Classification and Nomenclature
Exact classification of the porphyrias is
difficult due to the merging of various
clinical pictures one into the other, relative uncommoness, and inability of most
laboratories to exactly identify the various porphyrins from each patient.
Many classifications have been made,
the most common and clinically most

- 1. Congenital (photosensitive)
- 2. Acute, intermittent

useful being:

3. Mixed (chronic) cutanea tarda

However, the symptoms of the congenital type are not usually present until months or years after birth and it is extremely chronic, the acute type often achieves chronicity and is probably inherited, and the chronic type may exhibit photosensitivity. Watson and associates^{1, 10} propose a new classification,

Pyrrol Units	Uroporphyrin III	Coproporphyrin III
Porphobilinogen		Protoporphyrin 9 (III) *(Fe)
Delta-amino- levulinic Acid		
Succinate *Glycine		Heme
Succinyl Inermediates		Hemoglobin
Acetate		Myoglobin Catalase
		Cytochromes Peroxidases and other Respiratory Enzymes
		Corproporphyrin 1
	Uroporphyrin I	Excreted

based on their concept of the site of origin of the porphyrin of abnormal quantity and type:

- Porphyria erythropoietica, indicating excessive and abnormal porphyrin formation in the bone marrow. There is red staining of of the teeth and bones, early photosensitivity, increased hemolysis and erythropoiesis, splenomegaly. This corresponds to the congenital type.
- Porphyria hepatica, which suggests the liver as a site of formation of abnormal types and increased amounts of porphyrins.
 - a—Intermittent Acute type, abdominal and/or nervous manifestations, the most common porphyria.
 - Mixed type, photosensitivity with or without abdominal and/or nervous symptoms, frequent hepatic dysfunction,

Kark^a suggests an all embracing clinical classification:

The Major Porphyrinopathies-

- 1. Congenital Porphyria
- 2. Intermittent Porphyria a—familial

b-toxic

 Hepatocutaneous Porphyria a—cutaneous type

b-mixed type

- 4. Miscellaneous Porphyrias
 - a-Myoporphyria
 - Asymptomatic idiopathie coproporphyria
 - c-Porphyrinorrhea
- 5. Heavy metal and toxic Porphyrinuria a—lead poisoning

The Minor Porphyrinopathies—A large group of disease with minor aberrations of porphyrin metabolism which do not produce clinically important manifestations.

Sex, Age, Familial, Racial Incidence2,11,13 Waldenstrom5 first stressed that acute porphyria occurs in families, and it has been concluded that it is inherited as a dominant Mendelian gene, not sex linked. He recognized that latent cases existed in affected families and that despite abnormal porphyrin excretion, they were asymptomatic. The older literature reports a preponderance of women, at least twice as great as men, but more recent reviews state that it is nearly as common in males as in females. It is most likely to become manifest between the ages of 20 and 30 (about 45%) and the large majority between 20 and 40 (70%). However, recently a well documented case was reported in a eight month old infant15 and some cases with estimated onset in the sixth decade are reported. There are very few reported cases in Negroes and no reports in the other pigmented races.

Symptoms and Signs^{1,2,4,5,4,12,14,15}
Characteristically acute attacks begin by abdominal, nervous or mental manifestations. Markovitz,¹³ in a review, states that "At some time during the course of the disease almost all had abdominal pain, over three fourths had mental or psychic changes and three fourths had a peripheral neuropathy." Abdominal pain was the first complaint in the majority of these cases but psychic changes (15%) and weakness (8%) were also initially prominent.

The paroxysms of abdominal pain are often very severe, usually colicky in nature and may be generalized or localized to any part of the abdomen or loins. The pain may last hours to months and

b-others

is attributed to the spasm and dilatation of the bowel. Any acute surgical condition may be simulated but careful physical examination reveals a soft abdomen, without superficial pain, rigidity or rebound tenderness. Yet, the majority of patients have had one or more elective or exploratory operations. Nausea and vomiting are common, and the severe constipation which is usually present mimics intestinal obstruction. Lack of any bowel movement for days is frequent, however, occasionally diarrhea is present.

The nervous manifestations may be found in any part of the nervous system, central, peripheral or autonomic. peripheral neuropathy is reported in over 75% of cases and is characterized by weakness or flaccid paralysis, often quadraplegia. Unlike the symmetrical Landry's ascending paralysis, the weakness may begin anywhere and progress unpredictably, being widespread simultaneously or jump from one muscle group to another. Respiratory paralysis, a chief cause of death, and abdominal muscle paralysis are less common. Signs of upper motor neuron change are usually absent. The deep tendon reflexes are hypoactive or entirely absent, and they may be absent one day only to reappear the next. The variability of the reflexes is great; a hyperactive Achilles reflex, or even clonus may exist with absent knee jerks. Atrophy and contracture of muscles may result with the developing paralysis, yet the weakness may persist for long periods and still be followed by complete recovery. Persistent, severe pain in the extremities, especially the legs, usually precedes or accompanies the weakness. Described as burning or aching in character, it has also been likened to that of

diabetic neuritis. The pain may be difficult to control, and is often worse at night. Sensation is usually intact, but with severe damage, minor sensory loss with diminished pinprick perception is found, although difficult to evaluate in the face of muscle pain.

Cranial nerve involvement was reported by Markovitz¹¹ in 35 of his 69 cases. It varied markedly in degree and was never found without peripheral involvement. Difficulty in swallowing, regurgitation and aspiration point to bulbar involvement, and may be associated with respiratory paralysis. Vocal cord paresis with weak, hoarse, high pitched voice, occur often. Optic atrophy and eye muscle palsies are also found. Despite these acute symptoms chronic neuromuscular disease is much more common than acute fulminating neuroporphyria.

Psychic changes are present in over 34ths of reported cases. Pseudo-hysteria is most common and neurasthenia or undue nervousness often precedes an acute attack by many years. The patient with porphyria is described as "resentful, rascible, unpredicable, vituperative, violent in temper." and their seeming unreasonable neurotic type of complaining, without any recognizable organic diagnosis, puts the label of hysteric on them. Porphyrics are frequently difficult to treat on a medical ward. Nurses dislike caring for them and they "kindle feelings of hatred and aggression in the most urbane physician." More severe psychic abnormalities, ranging from marked hysterical or outspoken psychosis of manic depressive or Korsakow type to delirium or coma, have been described. Epileptiform convulsions or even typical grand mal seizures may occur.

Manifestations of autonomic involvement are difficult to substantiate, but the abdominal pain may be on this basis rather than as a direct effect of porphyrin on the intestinal wall, as some suspect. Tachycardia is often marked, possibly due to vagal nuclear or peripheral vagal involvement.

Hypertension of 150/100 or more has been noted in about 50% of some series, and an equal number had tachycardia. Irregular attenuation of retinal arterioles have often been seen with the hypertension, but the spasm disappears during remissions. Convulsions occur with hypertension, but headache or choked disc are absent, and rule against hypertensive encephalopathy. Oliguria may also be noted, but the absent albuminuria or hematuria differentiate from glomerulonephritis.

Low grade fever has been noted in ½ of a large series, but not usually during the acute phase. Brown pigmentation of the skin is noted in about 10% of patients and in rare cases is generalized and striking. It is not characteristic of Addisonian pigmentation but like that seen in some chronic diseases. The nature of the pigment is unknown. Jaundice has also been reported.

Laboratory Findings

Of cases by Markovitz.¹¹ However, Kark⁶ stresses that the generally held idea that porphyrinuria is recognized by the passage of a port wine colored urine, or a urine which develops its color on standing rarely or never occurs in acute porphyria. Only congenital porphyria produces urinary concentrations of uroporphyrin or coproporphyrin sufficient to give this color, Pigments other than porphyrins, porphobilin (a

brown uroporphyrin precursor) and the so called "rosein" pigments give much of the color to the urine of all types of porphyrinuria. The Watson-Schwartz test¹⁸ for the colorless porphobiligen is positive in about 80% of acute porphyrics and false positive reactions are never obtained. Porphobilinogen may be present in large amounts during relapse, but diminishes markedly or rarely disappears entirely during remissions. In patients without porphobilinogen, elevated levels of uroporphyrin or coproporphyrin may be demonstrated in the urine.

Exact identification and analysis of the various porphyrins can be done by using the techniques of Rimington (paper chromatography) or of Watson (column chromatography). The rough clinical screening tests for abnormal amounts of porphyrins in freshly voided urine are described; 6,16

1. Porphobilinogen-

- a. To 3 cc. of fresh urine add 3cc. of Ehrlich's reagent and shake briefly.
- Add 6cc of saturated acqueous solution of sodium acetate and mix thoroughly.
- e. 5cc of chloroform is mixed vigorously with the acqueous solution and allowed to separate. Porphobilinogen forms a brown-red aldehyde with Ehrlich's reagent which remains in the acqueous layer after mixing with chloroform. Urobilinogen forms a purple-red aldehyde with Ehrlich's reagent and is extarcted by chloroform after mixing.

2. Uroporphyrin-

a, In the dark, irradiate 10 ml. of urine with ultraviolet light. If uroporphyrin is present the urine will fluorescence red or orange red. The color may be masked or altered by the blue-green fluorescence of the urine.

b. If the above test is negative acidify the urine to about pH4 with aceticacid (approximately 2 ml.) Heat for 15 minutes in a water bath. Expose in the dark to ultra-violet light. (Heating at pH4 converts nonfluorescing porphobilinogen to fluorescing uroporphyrin.)

3. Coproporphyrin-

- a. Add 2 ml. glacial acetic acid to 10 ml. freshly passed urine.
- b. Add 30 ml, ether and shake vigorously. Allow to separate into 2 layers.
- c. Examine in the dark under ultraviolet light. A bright red fluorescence in the ether layer indicates the presence of massive porphyrinuria due to ether-soluable porphyrin. The most likely cause for this would be lead poisoning.

4. Precautions-

- a. Always run a control urine.
- b. Do not use rubber corks to seal test tubes or flasks. The Isoprene from the rubber fluoresces a bright blue and may obscure the red fluorescence of the porphyrins. c. Before running the tests, check all glassware for fluorescence under ultraviolet light. Do not use fluorescent glassware.
- d. If possible use a mercury-vapor ultraviolet light lamp.

Blood A leukocytosis of 10,000 to 31,000 was reported in about 40% of one large series. 11 Watson 1 and others believe an elevated W.B.C, to be less frequent. Certainly this is a confusing

factor which leads to laparotomy in the acutely ill patient with abdominal pain.

The N.P.N. or B.U.N. was elevated in many cases in which reported.¹¹ This may have been due to oliguria during the acute attack or superimposed urinary tract infection.

Low sodium and chloride levels, in the absence of alkalosis due to vomiting, have been reported⁶ by several British authors. But this does not seem to bear a relationship to the adrenal gland and does not respond to adrenal hormone treatment. Normal levels of urinary ketosteroids are found except with marked muscle wasting. Prunty¹⁷ has found changes of "lower nephron nephrosis" at autopsy and several authors suggest that the electrolyte disturbance is due to abnormal kidney function.

Cerebrospinal Fluid This was reported as normal in 24 and abnormal in only 9 of 69 cases.¹¹ In general the abnormality was mild (5 to 10 cells or mildly elevated protein) but in one patient the changes mimicked a purulent meningitis.

Electroencephalogram The findings of a toxic ensephalitis was reported in one case.¹¹

Electromyograph Changes compatible with those seen in regenerating peripheral nerve injuries are found.

Electrocardiogram An elevated S-T segment in lead I and a slurring of the S-T segment of lead III is reported in one case. A relative prolongation of the Q-T interval is noted by Hegglin. In one review series, 7 patients had non-specific lowering of T waves, or S-T segment depression or both, 8 cases were normal but the large majority were not reported. Ilowever, the largest series collected by one group, 10 cases, showed completely normal

E.K.G. except for sinus tachycardia.19

X-Ray^{21,22} The findings are non-specific and are primarily those of hypomotility including: marked slowing in the passage of a barium meal, gastric dilitation and impared peristalsis, atony of the esophagrus or duodenum, dilated loops of small or large bowel, impacted feces.

These findings may be limited to one organ or the entire gastrointestinal tract may be involved and may vary greatly in degree of atony. Occasionally, despite the presence of abdominal pain, there may be normal peristalsis. At times there may even be hypermotility in the form of diarrhea or "extreme contraction of the stomach suggesting a leather bottle stomach" and spasm of the pylorus and ileum. However, these have usually been transient phenomena and the abdominal symptoms have been predominantly those of constipation which may amount to complete ileus.

Mixed or Chronic Porphyria 1.2.14
Since the abdominal pains and nervous disturbances of mixed porphyria are similar to the acute intermittent disease, a familiarity with this more chronic porphyria is necessary for proper diagnosis. In general the systemic manifestations are milder and the prognosis better in mixed porphyria. The onset is usually from 40 to 60 years of age and is very rare before puberty. The old term "cutanae-tardive" stressed the late appearance of skin lesions which primarily differentiates from the acute disease.

The typical hydron aestivale of the congenital type are less frequently seen and the skin lesions are considerably less mutilating.

Skin vesicles and other lesions are manifestations of photosensitivity to sunlike, but unlike congenital porphyria the bulbous lesions may also appear after trauma and on exposure to heat.

Often it presents more as a chronic eczematoid dermatitis, and occasionally the skin is toughened, simulating scleroderma or dermatomyositis. Pigmentation may occur, usually as diffuse melanosis of the exposed skin and hair. Discrete pigmented macules also may occur. Brünsting has stressed the peculiar "purplish facies", aviolaceous hue or suffusion such as seen in polycythemia or alcoholics.

Some cases of mixed porphyria are without any nervous or abdominal findings and are only mixed in that they show liver functional impairment. Hepatic pathology is much more frequently found in the mixed type than the other varieties. Jaundice is not infrequent and frank cirrhosis may result. Ascites and spider nevi are occasionally seen and alcoholism is very frequent in this form of the disease.

Frequently liver function is impaired as decreased serum albumin, reversed A/G ratio, positive cephalin flocculation, thymol turbidity and B.S.P. retention, but increased urine urobilinogen is infrequent though unexplainable. Hypertrichosis may be especially striking in women. Diabetes mellitus seems to have more than a casual relationship in its frequent association.

Characteristic porphyrins excreted in the mixed type of porphyria are the same as those excreted in the acute type. However, porphobilinogen is often absent, except when abdominal or nervous manifestations are present. Long and complete remissions are noted and porphyrin excretion diminishes markedly with the complete disappearance of porphobilinogen.

Diagnosis 1,2,6,11,12,15 Porphyria should be considered in the presence of any obscure disturbance of the nervous system, especially unexplained peripheral neuritis, flaccid paralysis, bulbar palsy and hysteria. Porphyria also should be searched for in any instance of unexplained abdominal pain. A history of many laparotomies with persistence of pain or the passing of dark reddish urine is suggested. To make the diagnosis, the "index of suspicion" must be high. Once thought of, the Watson-Scwartz test for porphobilinogen can be rapidly done as office procedure, and if positive it indicates acute porphyria. Further studies can then be done to determine the other types of porphyrin present in the urine.

Patients with acute intermittant porphyria have been confused with combat fatigue, hysteria, pheochromocytoma, glomerulonephritis, epilepsy, poliomyelitis, muscular dystrophy, delirium tremens, Addison's disease, cholycystitis, renal colic, appendititis, bowel obstruction, pancreatitis, myocardial infarction, lead poisoning and other diseases. In gall stone colic the urine Ehrlich reaction may be positive due to excess urobilinogen, Renal colic is confused due to the dark reddish urine with the pain of calculi. The lack of rebound tenderness and muscle spasm distinguish from appendicitis. The marked distention of large and small bowel, and hypoperistalsis make obstructed bowel a difficult exclusion but the small bowel ladder pattern and other X-ray findings are not observed. The leukocyte count may be considerably elevated, further simulating an acute abdomen.

The persistent tachycardia, muscle weakness and nervousness may suggest hyperthyroidism. Pigmentation, ame-

norrhea, gynecomastia, weakness, wasting and depletion of sodium and chloride confuse with Addison's disease. However, the amenorrhea is secondary to malnutrition, gynecomastia the result of liver disease or refeeding after tissue wasting, and the pigmentation not typical for Addisonianism. In lead poisoning the urine contains a marked increase of coproporphyrin, but no porphobilinogen or uroporphyrin, and the amount of coproporphyrin is insufficient to give a reddish urine. Many cases of "hydroa aestivale seu vacciniforme" are unrelated to porphyria, although the skin lesion is undistinguishable; but unlike porphyria, window glass prevents the photosensitivity as it absorbed the exciting light (below 3,000A). The intermittant hypertension and nervousness confuse with Pheo chromocytoma, Hypertension, dark urine and oliguria, during an acute episode, give resemblance to glomerulonephritis,

Pathogenesis 1.2.5.6.11,14.23,24 In the past the photosensitive type in children has been regarded as congenital and familial and the acute type as acquired. However, most of the acute cases can be shown to be familial, by careful search for latent or mild cases among relatives, and clearly indicates that at least a tendency to the disease is also hereditary in this form. The factors producing an acute episode are unknown, but chemicals have been shown to incite acute episodes, Waldenstrom⁵ first indicated drugs as a factor, and related the development and remission of acute porphyria to the exhibition and withdrawal of barbiturates in susceptible persons. Barbiturates containing allyl groups in their configuration are especially dangerous, and the use of pento-

thal anaesthesia in operations on mistaken acute abdomens has resulted in deaths. However, other patients have recovered while taking barbiturates regularly. A loading test in which large doses of barbiturates are given, may be used diagnostically to bring on an acute attack, but it carries some danger, Alcohol is thought to precipitate symptoms and was indicated in 23 of S1 cases at the Mayo clinic.16 Sulfonamides are also frequently cited as a toxic agent. Many other drugs have been incriminated, especially arsenic, lead and other heavy metals. In animal experiments, Sedormid has produced porphyrinuria.

The relationship between pathologic metabolites and the clinical symptoms is not clear. In animal experiments, loops of bowel bathed in porphyrin solution go into spasm uneffected by Atropine. Yet Watson2 injected relatively large amount of coproporphyrin into human volunteers without symptoms. Porphobilinogen is absent from the urine of patients with congenital or mixed porphyria without abdominal or nervous manifestations, and Watson therefore incriminates porphobilinogen. However cases are reported of patients without porphyrinuria during an acute attack, though appearing later, and also of patients asymptomatic despite continued porphyrinuria. Others have suggested parasympathic nervous involvement to explain the gastrointestinal symptoms of porhpyria.

Pathology^{2,4,11,12,17} In general the findings are nonspecific and disappointing. Major findings are in the nervous system and consist of patchy degeneration of the myelin sheaths of the peripheral nerves and chromatolysis of the anterior horn cells of the spinal cord. One study²⁵ found the myelin degenera-

tion to be most severe where the sheaths entered the central grey matter of the cord, and in the intracortical portions of the cerebral cortex; this suggested a toxic blood born factor as the blood supply is best in these areas. The Purkinje cells of the cerebellum, the dentate nucleus, cerebral cortex, basal ganglia, hypothalymus and celiac ganlion have showed varied degenerative changes.

Early necrosis of the centrilobular liver cells and granular pigment in the liver has been described. Red fluorescence under ultraviolet light was found lining the kidneys tubules, in the liver, C.N.S., costal cartilages, posterior pituitary, adrenals, heart and sternal marrow.

Treatment 1.6.11.14.21 Unfortunately there is no specific therapy for acute intermittent porphyria, and the variaability in disease pattern with spontaneous remissions makes therapeutic evaluation difficult. Barbiturates, alcohol, sulfonomides or heavy metals are to be avoided entirely. Chloral hydrate. paraldehyde and (from preliminary studies) Rauwolfia may be used for sedation without precipitating attacks. Opiates may be used to relieve severe pain, but 100 mg, of demerol will not be effective for longer than three hours. Ganglionic blocking agents as T.E.A.M. as well as opiates, may be used to control abdominal cramps. Corticotropin and adrenal steroids have produced varied results, but dramatic responses in acutely ill patients are reported. The steroids at least cause no harm, and should be used in fulminating acute porphyria which is often fatal. Massive vitamin therapy (especially B complex), calcium salts, liver preparations, atropine, prostigmine, myanesin as well

as electroshock therapy have all been found useless,

Prognosis The overall mortality in Waldenstrom's 100 cases was 56%, and he stated that there was no other metabolic disease with so serious a prognosis as acute porphyria. Markovitz11 found an overall mortality of 58% of 69 patients. In cases with nervous manifestations approximately 80% die within five years of the first attack, according to Watson. The outlook is markedly better if only abdominal symptoms are present, but nervous system involvement may develop at any time. Since repeated episodes of abdominal pain may occur in one patient, it is apparent that the mortality during any one episode of abdominal pain is low. Twenty patients with latent porphyria in Waldenstrom's series, all lived.

Summary

The clinical aspects of acute intermittent porphyria are presented, and the importance of a high "index of awareness", in order to make the diagnosis is stressed. The diagnosis should be suspected in patients with unexplained abdominal pain and obscure peripheral neuropathies, with various psychic changes. Proof of the diagnosis depends on the simple test of porphobilinogen, or other porphyrins, in the urine.

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24. Leading Article. Porphobilinogen. Ibid. 25. Abbot. K. and Evay. H. Acute Porphyrie. Bull. Los Angeles. Neur. Soc. 11: 20. 1946. The occasion to treat triplets with Erythroblastosis Fetalis of the icterus gravis type must be an infrequent one. Literature available shows a report by O. Propop and C. Vollbrand (University of Bonn) of triplets born 11-17-52—3 female infants with recovery after 2 transfusions each—100 cc., 80 cc., and 110 cc., of citrated blood respectively.¹ No literature to date is available on triplets born in the United States with Erythroblastosis Fetalis with recovery. I wish to report such a case.

Mrs. C. Q., age 31, at whose birth 1 was the attending physician, presented herself at the office on 6-14-54. LMP was 4-7-54. A diagnosis of pregnancy was made—EDC 1-12-55. Five children were born to her previously—ages 9, 8, twins 7, and 5. Her menstrual periods were of the 25 day type. Hemoglobin 12.5 gms.—weight 157—Rh "doubtful to be repeated"—blood group A—x-ray of her chest for a cough was essentially negative—blood pressure 120/74—1 miscarriage August 1953 at 2½ months.

On 6-26-54 she passed a large clot of blood while urinating which she stated would fill both hands. She refused to go to the hospital, but was ordered to bed and was to report any more bleeding. A brownish vaginal discharge persisted for 3 weeks.

She returned on 7-20-54 stating that she felt uncomfortable in the abdomen. Hemoglobin was 10.6 gms. at this time—Iron B was increased.

Since she lived 20 miles away and was unable to come at regular intervals she did not return until 10-18-54. Her weight at this time was 195½, and she stated she was hard pressed to turn around in the bar where she served

Erythroblastosis Fetalis in Triplets

HERMAN M. JUERGENS, M.D.
Belle Plaine, Minnesota

drinks to ring up the cash register because of the size of her abdomen. An x-ray of her abdomen was taken. The x-ray report was as follows—"Only one fetal skeleton can be visualized but there appears to be considerable enlargement of the uterus. This is probably due to excess fluid. The entire fetal skeleton cannot be visualized, apparently due to motion at the time of exposure so that we cannot definitely determine the size." I did not wish to repeat the x-rays of the abdomen.

On 11-8-54—weight 199½—blood pressure 120/66—hemoglobin 12.9 gms.

11-29-54—weight 207—"Possibly two heart beats."

12-20-54—weight 207—blood pressure 146/92—head or buttocks not felt on rectal and transverse position entertained—I plus edema legs—urine negative—hemoglobin 12.9 gms.

12-27-54—weight 206—less edema—blood pressure 136/92.

12-31-54 at 1:51 P.M. baby girl born (1) Joan—breech—weight 5 lbs. 13½ oz.

at 2:10 P.M. baby girl born (2) Jean—posterior vertex—weight 6 lbs. 71/4 oz.

at 2:19 P.M. baby boy born (III) Jerome—footling—weight 5 lbs. 7½ oz.—at a near-by hospital. Babies I and II were attached to the same placenta—number III on a separate placenta. The placentas were large and thickened and of a grayish color. The weight was not taken.

Because of persistent bleeding and sluggish uterus, the uterus and vagina were packed with gauze and a transfusion given to the mother. Bleeding stopped—packing removed in 24 hours. It was noted that the infants were jaundiced at birth-number I more so than the others-amniotic fluid was yellow. The mother's blood was now found to be Rh negative. For some unaccountable reason this had not been repeated. The husband's blood was Rh + and the infants all were Rh +. Rh antibody titer: Agglutinating titer: positivethrough dilution 1:32-Blocking titer: positive-through dilution 132-Indirect Coombs test: positive on the mother.

Hemoglobin of baby Joan (1) was 17.6 gms, on 1-1-55, and 38% nucleated R.B.C. on 1-2-55. A transfusion of 56 cc. citrated Rh negative type "O" was then given. On 1-3-55 transfusion of 100 cc. citrated blood with hemoglobin 17.2 gms. On 1-4-55 transfusion of 54 cc. citrated Rh negative with hemoglobin 14.7 gms. On 1-5-55 transfusion of 20 cc. citrated blood Rh negative with hemoglobin 14.7 gms. On 1-8-55 transfusion of 45 cc. with hemoglobin 14.7 gms. On 1-11-55 transfusion of 55 cc. citrated blood Rh negative was given.

On 1-15-55 transfusion of 65 cc. citrated blood Rh negative with hemoglobin of 13.4 gms. On 1-24-55 transfusion of 80 cc. citrated Rh negative with hemoglobin of 14.7 gms. Serum bilirubin 1-24-55 6.9 mg. %. On 2-7-55 transfusion of 90 cc. citrated blood given. Hemoglobin at 13.9 gms. A total of 575 cc. given into scalp veins or cutting down on veins in the ankle. The infant was kept in the hospital until 3-11-55 weighing 8 lbs. 12 oz. This infant had the stormiest convalescence of the triplets in not taking feedings as well as the others-regurgitating her feedingshaving icterus longer. She also returned on 2 separate occasions to the hospital for acute bronchitis and broncho-pneumonia on another occasion. Evidence of kernicterus was not found and the parents did not wish to have an evaluation made by a competent pediatrician.

Jeanne Q. (II) jaundiced at birth hemoglobin 17.8 gms.—11% nucleated R.B.C.—was given transfusions of:

61 cc. citrated Rh negative "O" blood on 1-2-55—hemoglobin 17.8 gms,

20 cc. citrated Rh negative "O" blood on 1-3-55—hemoglobin 18.1 gms.

40 cc. citrated Rh negative "O" blood on 1-5-55—hemoglobin 18.4 gms.

54 cc. citrated Rh negative "O" blood on 1-8-55—hemoglobin 14.7 gms.

30 cc. citrated Rh negative "O" blood on 1-24-55—hemoglobin 12 gms.

205 cc. Total—and was discharged on 1-27-55 weighing 7 lbs. 14 oz. The jaundice cleared up rapidly.

Jerome Q. (III) jaundiced at birth— 18% nucleated R.B.C.—was given transfusions of:

52 cc. citrated Rh negative "O" blood on 1-2-55—hemoglobin 19 gms.

20 cc. citrated Rh negative "O" blood on 1-3-55—hemoglobin 18.4 gms. 40 cc, citrated Rh negative "O" blood on 1-5-55—hemoglobin 17.2 gms.

65 cc. citrated Rh negative "O" blood on 1-15-55—hemoglobin 10.9 gms.

80 cc. citrated Rh negative "O" blood

on 1-18-55-hemoglobin 12.8 gms.

55 cc. citrated Rh negative "O" blood on 1-24-55—hemoglobin 10.8 gms.

312 cc, Total—and was discharged on 2-1-55 weighing 7 lbs. 11½ oz.

Summary

A rare case of Erythroblastosis after repeated transfusions is Fetalis in triplets with recovery briefly discussed.

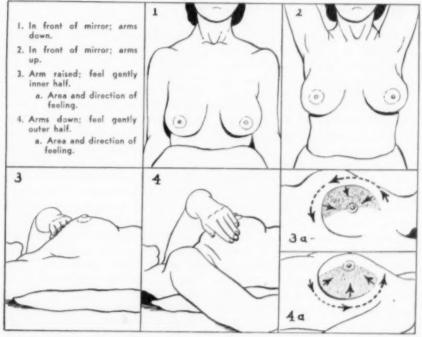
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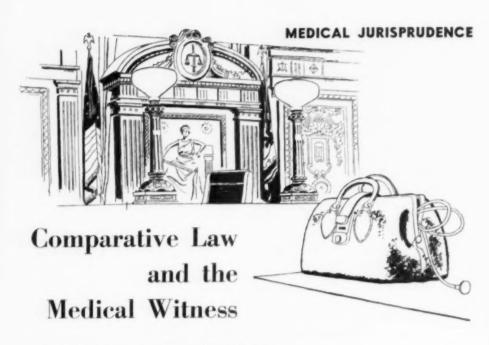
I wish to acknowledge help from Drs. C. F. Cervenka and E. Doherty in performing transfusions.

Clini-Clipping

SELF EXAMINATION FOR TUMORS OF THE BREAST



(Vol. 85, No. 10) October 1957



in Western Europe and the United States

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A legal institution can be fully comprehended only in the light of social, economic, religious, political, racial and climatic circumstances which surround it.

Comparative law is more than a comparison of rules of one jurisdiction or of one system on any given point with those of another since legal precepts cannot be compared outside their social and historical setting. It is not the function of comparative law to furnish ready made rules of one system to be embodied in another. Rather, the examination of other systems may furnish an impressive mass of raw materials for creative law making. This study

can furnish the mirror in which to see a new aspect of ourselves.¹

Today if we are to proceed wisely in the newer juristic activity of our complex society we must examine the legal materials of the whole world. Savigny defined law "as the totality of life seen from a specific viewpoint." Let us examine the law as seen from the vantage point of the medical witness.

Western European System The Bible refers to the earliest needs for the use of medical appraisal. In Exodus² the signs of virginity are mentioned as are crimes against nature in Leviticus.² Deuteronomy says expressly, "While it is difficult to discern between blood and blood, between one cause and another cause, between one leper and another address yourselves to the priests, consult with them and you will discover the truth."

The period extending from the earliest times to the fall of Charlemagne in 800 A.D. was a period characterized by the perfection of the law as compared to the insufficiency of medicine. Medicine as a profession . . . was it not exercised in Rome by strangers and slaves?

Gregory IX in 1234 published a list of those medico-legal problems that needed the advice of physicians. By 1532 La Caroline, the first code of criminal procedure was established under Charles V outlining the specific need for physicians in certain medico-legal questions. The study of anatomy (Vesalius, Eustachius, Fallopius, Sylvius) at this time was making great headway and Ambroise Paré instructed young surgeons to furnish good reports when called upon in medico-legal matters.

French System⁵ In France there is no trial by jury in civil cases. The court draws up a panel of medical experts every year after consultation with the medical organizations of the district. Specific requisites of capacity are laid down by law. Inscription on this panel gives the expert a certain standing during the legal procedure. The fact that he owes his appointment to the court itself and not to the litigants has other important advantages to him.

French lawyers and physicians are in agreement that it is unedifying that two sets of experts should propound, on behalf of their parties, diametrically opposed opinions on scientific issues. Any question which can't be resolved without special professional knowledge and experience is always referred by the



court to a scientist or professional man who then furnishes an official expert report which is in written form.

Thus in a French proceeding only one expert is as a rule appointed to act. The question on which he is to report must, moreover, be precisely indicated from the outset. Further, the medical witness may refer only to purely medical matters.

The first part of the report is a statement of any investigations that the expert carried out. The second recites the conclusions he drew from his exposition of the facts.

The hypothetical question is avoided. The law enables medical experts to speak in terms which include inferences, deductions and conclusions as well as the data upon which they are based. The French expert does not assure the court that he will speak "the truth, the whole truth, nothing but the truth." This latter formula at best is unsatisfactory because the expert most often may be able

to give only an approximate opinion. Here then the expert merely promises to give his opinion according to his best honor and conscience.

The written report must be communicated, or at least be open to both parties before the hearing. When the expert is called upon to introduce his report personally at the hearing great care is taken not to press him too hard for definite and unqualified replies. These safeguards help to sustain for medical experts a considerable reputation in the courts. Such is their professional standing and detached position that judges are most reluctant to over-ride their considered opinions.

In this system the expert is absolute master of his testimony. The defense is at a great disadvantage in exercising any control over the official expert who is placed in a position which favors partiality.

German and Austrian System⁶ Historically chairs of legal medicine were created in Germany at the end of the 17th century or more than a hundred years before those in France, England and Italy. While in Germany legal medicine assumed greater and greater importance in France and England there was a hiatus.

The first Institute of Legal Medicine was founded in Vienna in 1804. In addition to medico-legal activities these institutes provide, (a) expert assistance to judicial and administrative authorities on medico-legal matters (b) autopsies in homicides and suspected death and (c) help to the police whenever scientific methods must be used in criminal investigations and (d) toxicological investigations in suspected poisonings, identification of fire-arms, examination of victims of sexual crimes, of blood

and seminal stains. Expert opinion of these institute personnel is eagerly sought in matters pertaining to the civil as well as the criminal law. They are called to determine the cause of accidents, nature of injuries, parentage of bastard children.

The directors and their assistants of these institutes are the official experts of the courts. In Germany the permanent consultants to the courts are known as Gerichtartze. Here, however, an expert who is appointed by a judge may be challenged by the parties on the same grounds that a judge may be challenged (intent, enmity, relationship . . . Strafprocedordnung). In most cases it is within the court's discretion as to whether an expert will be used. The judge will name an expert, "when ever investigations are necessary which demand a special knowledge of particular sciences or arts."

The defendant in the French and German system has no control over the court-appointed expert. He may choose his own expert to assist him in the preparation of the defense. This expert will not have an opportunity to make an independent examination of the persons or things which are the subject of the "expertise." The defendant's expert will be limited to the criticism of the written report of the official expert. He may then submit a report embodying his criticisms and opinions which will then be added to the dossier of the case. However, since this report is considered a partisan document it will not carry the same weight as will the report of the official expert. At the trial in French and German courts the official expert testifies orally; the written report which he made earlier serving as the basis for his examination. He may be placed under

cross examination by defense counsel who may also call his own experts to contradict the official expert.

In these procedures the presiding judge examines the experts originally and not the prosecuting or defense counsel. Only when the judge completes the examination may supplementary questions be put.

Italian System⁷ The word "trial" does not exist in the Italian Code. A case proceeds toward completion through a series of hearings spread out over a period of time. First to be determined is whether reparations are due. If they are then the next question is the amount. The widest of powers are granted to the judges in the direction of the litigation since they evaluate evidence with the broadest of discretion.

Italian experts do not testify orally. Rather, their written reports are read. He may be called upon to elucidate orally some parts of his written report. In this way is the "battle of the experts" avoided. A defense expert is considered a mere technical assistant to the defense and anything he contributes may be brought out by argument of counsel at the end of the trial. Italian law feels that certainty can be obtained if only one positive opinion is permitted. Also, the long series of hearings spread out over a period of time make the "surprise" witness unheard of in Italy.

Critique Inquisitorial is the procedure in France, Germany and Italy. This is in contrast to our accusatory method. The preliminary judicial inquiry is conducted by a magistrate. At the trial the actual conduct of the case is by the presiding judge who does most of the questioning. The expert witness appears fundamentally as an auxiliary

to the investigating magistrate or to the trial judge,

The existence of an official list of experts does not necessarily insure competency. Inscription on the list carries standing and prestige in the medical profession. In France, at least, political and other extra-legal influences which have nothing to do with merit are used to obtain inscription on the list. Further, the defense expert is relegated to a secondary role, The opinion of the official expert since it is supposed to emanate from an impartial source is all important. Without the necessary technical training although the judge is free to make independent evaluation of the experts' findings they are usually incapable of doing so. The report of the official expert is usually conclusive even though lacking in proper supervision.

Anglo-American Systems The essential difference between the American and the Western European approach lies chiefly in the institution of trial by jury of civil suits in the United States. An American lawsuit revolves around a trial which is conceived as a jury trial, a highly concentrated affair since the evidence must be heard by the same jury in the shortest period of time. The leading role in the conduct of the litigation is played by the parties rather than by the judge. The function of a witness is not so much to establish the truth as to support the allegations of the party who offered his testimony Broad reliance is placed upon oral evidence. To the European this concentration and orality seems a gamble. Further, crossexamination is the logical and necessary feature of the American legal system.

The earliest forms of common law justice were administered essentially by



means of mechanical tests. There were:

- Compurgation or law wager. The defendant denied the claim on oath administered in a set form.
 If he succeeded in obtaining a certain number of persons or compurgators to back the demands with oaths he would win.
- Trial by Battle, Victory would be obtained not only by physical force but by intervention of Providence into the side of right.
- Trial by Ordeal. This was a process of proof designed for the intervention of some sign or miracle which would determine the question at issue between the parties.

It was a great step forward when these mechanical forms gave way to trial by jury. New adjudications became the product of the reasoning process of a group of rational men who now acted upon information which was placed before it, Early juries were bodies of neighbors already acquainted with the facts which were easily capable of discovery. These jurors partook of the character of witnesses as much as of judges. There was no settled practice of adducing information by means of sworn testimony of the witness. How a jury came by its knowledge was not originally a matter with which the law concerned itself.

The 16th century saw the distinction between witness and juror become clearer. It was by an Act of 1562 in England that there was provided for the first time a process to compel witnesses to attend and testify in the courts. Early jurors were expected to make their own inquiries. Then when the jury as a rational body began to function as an integral part of the judicial system there arose from time to time occasions when the court had to have knowledge or information of a special or particular sort.

The methods for obtaining the requisite specialized knowledge were two. One was to impanel a jury of persons specially qualified to pass judgment in a particular case. This was really a jury of experts. The second was for the court to summon skilled persons to inform it about those matters which were beyond its knowledge.

These special juries are the ancestors of modern special juries and the modern expert witness. The first experts were in all probability summoned to the court rather than to the jury and the court would then instruct the jury on the matters involved. According to Holdsworth these "witnesses were regarded as expert assistants to the court." Early juries were expected to decide issues from their own knowledge. The practice of taking testimony from witnesses was looked upon askance until the 16th century.

It was only during Elizabeth's reign in 1562 when legislation was enacted to provide for compelling witnesses to appear that proof by witnesses in open court, the modern method, became the ordinary accompaniment of jury trial. By the middle of the 17th century the role of juror had become clearly distinct from that of witness.

The expert witness developed only when proof of facts by witnesses rather than personal knowledge of the tribunal became the accepted procedure.

In 1619, a physician testified that a child born January 5, 1611, might be the daughter of a man who died 280 days previously. The court held, "that it might be well as physicians had affirmed that said Elizabeth who was born 40 weeks and more after death of said Edmund Andrews, might well be his daughter." 10

In 1665, Sir Thomas Browne, most distinguished physician of his time and author of Religio Medici, testified before a jury as to his belief in witches. The court said, "there was Dr. Browne of Norwich, a person of great knowledge, who after his evidence given and upon view of three persons in court was descried to give his opinion and what he did conceive of them. He was clearly of the opinion that these persons were bewitched."

It was not until the 1678 case of Rex v. Pembroke that experts for both sides appeared. This was a case of murder and the question to be resolved was whether a person could die of wounds without fever.

The whole law of evidence was shaped largely by the development of trial by jury. There came about the exclusionary rules which determined competency and admissibility of evidence. An ordi-

nary witness testifying to his experience in regard to matters at issue should testify to facts observed and not as to his opinion or inferences therefrom. Only when the witness has some special skill which would aid him at arriving at a conclusion is he permitted to express an opinion. By 178210a it was established that an expert could give an opinion which is the modern rule. The opinion rule is one of exclusion which limits the ordinary witness to statements of reasonable fact. The great exception to the exclusionary opinion rule applies to expert witnesses who are permitted to give an opinion,

To provide the court with the necessary information, the law permits specialists qualified as experts not only to testify as to the facts under consideration but also to offer opinions on hypothetical questions. In the Tuckerman will contest in Boston, counsel in the course of probing mental competency of the testator addressed the physician who was a psychiatrist and who was on the stand with a hypothetical question which was twenty thousand words long and required three hours for reading. The witness answered, "I don't know." 11

The American system is essentially partisan, adversary and contentious; always a battle of theory and fact. The battle of the experts has aroused cynical skepticism of the public as to the integrity of both the medical and the legal professions. Yet, conflicts between experts relate in most cases to their opinions which under this system is inevitable.

Other factors surrounding modern litigation has been the extension of liability¹² which now includes emotional, psychic and pre-natal injury. Most juries are plaintiff-minded since they are primarily concerned with the security of the individual. The average juror feels that economic loss should be distributed over wide groups rather than to have misery imposed upon the injured individual. This modern rough social justice, then, lends itself well to any and all kinds of testimony.

Now nine out of ten human incidents with medico-legal implications are resolved by the settlement procedure and not the trial procedure. The Supreme Court calendar in some of the New York courts have been as much as four years behind.

At first plaintiff's lawyers thought they might fare better with a jury than with a judge. Then when jury trial bewas an advantage inducing settlement came a bottle-neck it was sought by defendants because it meant delay which on more favorable terms.

Conclusions and Summary

1. Comparative law is more than a comparison of the rules of one jurisdiction with that of another. A legal institution can be comprehended only in the sociological setting surrounding it. In the complex society of today creative juristic activity can proceed only by a study of the legal materials of the whole world which may give us a new legal image of ourselves.

2. The Bible refers to medicolegal questions. The period to the fall of Charlemagne 800 A.D. was characterized by the perfection of the law in comparison to the insufficiency of medicine. Gregory IX 1234 and Charles V in 1532 published those medico-legal entities that needed and sought the advice of physicians.

3. In France, Germany, Austria and Italy there is absence of trial by jury in civil cases. In France a list of experts is drawn up by the courts. Such is the standing of the court-appointed expert that judges are reluctant to over-ride their opinions. Although the expert's re-

port is written at the trial he testi-

fies orally when he may be cross-

examined by defense counsel.

4. Historically Germany

4. Historically Germany and Austria developed legal medicine to a greater extent than the other countries of Western Europe. In Germany permanent consultants to the courts are Gerichtartze, The choice of expert may be challenged by the defense on proper grounds. The defendant's expert will be limitd to criticism of the written report of the official expert.

5. The Italian Code does not contain the word "trial". A case proceeds toward completion through a series of hearings spread over a period of time. The judges have the widest discretion in the conduct of these hearings and in the evaluation of evidence. In Italy the court-appointed expert does not testify; he simply reads his report. They feel that certainty can be obtained by receiving only one positive opinion.

6. Trial by jury in civil suits is the essential difference in the American system which revolves around a highly concentrated oral trial. Leading role is played by the parties rather than the judge. The

function of the American witness is not so much to establish truth as to support the allegations of the party offering his testimony. Since so much reliance is placed upon oral evidence, cross examination is the logical and necessary feature of this system.

7. The opinion rule is an evidentiary rule of exclusion which

limits the ordinary witness to statements of reasonable fact. The exception to the opinion rule applies to expert witnesses who are permitted to give their opinion. Specialists qualified as experts are permitted not only to testify as to the facts under consideration but also to offer opinions on hypothetical questions.

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- 133 East 58th Street



WANT A CHUCKLE? SEE

"OFF THE RECORD . . .

THARE a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice. Pages 17a and 21a.

Clinico-Pathological Conference

University of Illinois Research and Education Hospitals

This was the first admission of a 48year-old white laborer who had been well until 4 months earlier when he suddenly began to have right chest pain and hemoptysis without fever.

Two weeks later his feet began to swell and his abdomen to enlarge. Although he had neither nausea nor vomiting, diffuse abdominal pain followed the eating of small amounts of food. He was hospitalized elsewhere 3 months before admission here, with low-grade fever and progressive anasarca. Blood counts and urinalyses were normal. A diagnosis of "hydrocele" was made and an operation was performed on the scrotum.

An upper GI series reportedly showed a duodenal ulcer.

The patient slowly deteriorated, and in the 3 months lost 10 lbs. despite the swelling. When jaundice appeared, transfer here was arranged.

There had been no known exposure to hepatotoxins or to tuberculosis, and the patient's alcohol intake had always been slight.

Physical Examination The patient was thin, and appeared chronically ill. He was lethargic and confused. His pulse was 128 and his respirations 28 per minute; his blood pressure was 110/60 mm. Mg., and his temperature by rectum was 103.6°F. The nail beds were evanotic. Skin turgor was extremely poor, and there were streaks of purpric spots and numerous excoriations on the trunk and extremities. The venous pattern over the anterior chest and abdominal wall was prominent, and the veins filled from below. The sclerae were icteric. The tongue was red and smooth.

There was evidence of a pleural effusion on the right, and crepitant rales were heard over both lower lungs posteriorly.

The heart was not enlarged, but there was a Grade I apical systolic murmur, and protodiastolic gallop at the base.

A fluid wave and shifting dullness were present in the distended abdomen.

The liver edge was felt about 2 cm. below the right costal margin at the midclavicular line, and there was a firm epigastric mass which could not be definitely distinguished from liver.

The spleen was not palpable. Peristaltic sounds were hypoactive. There was a 10 cm, incision in the right scrotum through which creamy pus was oozing. There was pitting edema of the legs and abdomen to the level of the umbilicus. No pathological reflexes were elicited, but there was a "flapping tremor" of the right hand,

Laboratory Data Hemoglobin was 10 gms. per 100 cc. blood. The leukocyte count was 33,950 with 90% polymorphonuclears. The red blood cells appeared hypochromic; only a few platelets were seen. The dark vellow urine, with a specific gravity of 1.015, contained 4 + bile and urobilinogen, but was negative for albumin, sugar, and acetone. The sediment showed 3 to 5 white blood cells and many granular and hyaline casts per high power field. Blood Kahn test was a doubtful 1 +, and the Wassermann test was negative. Total serum bilirubin was 9.9 mgm.%, alkaline phosphatase 2.8 units, and prothrombin time 45.5 seconds (12.5%).

Thymol turbidity was 18 units, cephalin flocculation was 4 + in 24 hours, and total cholesterol was 147 mgm.%. The plasma non-protein nitrogen was 60 mgm.%. The serum sodium was 140, potassium 5.7, chloride 99, and carbon dioxide (combining power) 17 meq. per liter.

The pus from the scrotal wound as well as two blood cultures grew out coagulase-positive Micrococcus pyogenes.

X-ray Studies Chest films showed bilateral parenchymal infiltrates which in some areas appeared to be confluent. The right diaphragm was elevated, and there was atelectasis and/or fluid above it. A film of the abdomen suggested increased fluid, but the gastrointestinal gas pattern was unremarkable. No skeletal abnormalities were seen.

Hospital Course The patient was treated with fluids and tetracycline intravenously, and was given oxygen by mask. In spite of this, he remained cyanotic, and his persistent cough was accompanied by some hemoptysis. His course was rapidly downhill, and he died about 12 hours after admission.

Discussion Dr. Roberg: This is the case of a 48-year-old laborer who felt entirely well until 4 months before his death. The transition from health to illness was abrupt and was heralded by pain in the right chest and coughing blood.

In the absence of any other history than that of coughing blood, with no fever and no evidence of sepsis, the only conclusion one can draw is that this man was having pulmonary infarction, either of blood clot or tumor. From then on he failed progressively and rapidly, developing anasarca, an abdominal mass, a collateral venous pattern, and terminal jaundice.

Our problem here, then, seems to include some defect of the venous circulation; pulmonary lesions, with pleurisy and hemoptysis; and hepatomegaly and hepatic failure with ascites and edema.

With respect to the ascites and anasarca, there are 4 common pathogeneses. The first and most common, of course, is positive water and sodium balance, secondary to either myocardial or renal insufficiency. We have evidence here for neither.

The second pathogenesis is that of a disturbance in the hydrostatic and oncotic pressure relationships in the portacaval system,

This appears to be the one producing the anasarca in our patient.

The third and fourth common pathogeneses are inflammatory, infectious and neoplastic.

The prototype for the infectious forms of ascites is the tuberculous.

Could this man have had hematogenous disseminated tuberculosis with tuberculous peritonitis, pleuritis, pneumonitis, pericarditis, and also hepatitis?

Acute diffuse hematogenous tuberculosis, when it occurs, is an overwhelming infection, leading to rapid death. The subacute type which usually leads to a small-sized heart with constrictive pericarditis, has a natural history much longer and less hectic than that of our patient, so I think there is no evidence here for considering a tuberculous polyserositis as etiologic.

The other inflammatory etiology, carcinomatosis, when it involves the peritoneum, can produce ascites rapidly.

Carcinoma What was this epigastric mass? Might it have been a carcinoma of the pancreas? Might it have been any other carcinoma, say of the gallbladder or of the bowel, giving rise to generalized carcinomatosis of the peritoneum, metastatic carcinomatosis to the liver, and then thrombotic emboli to the lungs?

Very often, with generalized peritoneal carcinomatosis or any advanced malignancy, there is deep venous thrombosis and multiple pulmonary emboli, as well as tumor emboli, to the lungs.

We have no evidence, though, that this man had any abdominal carcinoma. The x-ray of the stomach was normal, and no symptomatology came from the bowel. Carcinoma of the gallbladder is unusual at 48. Carcinoma of the pancreas would give the epigastric mass and venous thromboses, but again we have no evidence for it.

Carcinomatous peritonitis would need to be considered, associated with progressive portacaval thrombosis.

Cirrhosis I think that the two pathogeneses that one must consider seriously are obstruction to the portacaval system, with its hydrostatic and oncotic implications, and carcinomatous peritonitis with secondary thrombosis.

Now, with respect to the liver, we come back to very much the same type of reasoning. Could he have had a primary carcinoma of the liver? He might well have had a subclinical cirrhosis, There is no history of alcoholism, no history of malnutrition; but again only about 80 percent of the patients with cirrhosis are alcoholic and have obvious malnutrition. He could well have had subclinical cirrhosis and then a primary hepatoma, giving the mass in the epigastrium.

This man does have some of the characteristics of "accelerated cirrhosis." He rapidly develops ascites, collateral circulation, and hepatic insufficiency. If this history were extended over a five- or ten-year period, it could well be that of Laennec's cirrhosis. If you see a very rapidly developing clinical syndrome consistent with cirrhosis, it often means that there is indeed cirrhosis, but it is being complicated by primary carcinoma of the liver.

Thrombosis Could all this be idiopathic venous thrombosis? Certainly the literature is accumulating more and more instances of people with undiagnosed deep venous thrombosis of the legs who have had recurrent pulmonary embolizations over a period of weeks, months, or even years. These recurrent emboli then act as sites for progressive in situ thrombosis of the pulmonary arteries. However, multiple pulmonary thrombosis in recurrent idiopathic thrombophlebitis usually produce intense dyspnea, cyanosis, avascular lung fields, and cor pulmonale with a diffusely and greatly enlarged liver. That is lacking here,

If there is no carcinoma of the liver, either primary or secondary, could the epigastric mass nevertheless be hepatic? That question leads one to the possibility of subacute, progressive, asymmetric thromboses of the hepatic veins, a variant of the Budd-Chiari syndrome.

There is not the catastrophic illness of sudden total occlusion of the hepatic venous drainage. The occlusion is localized to certain hepatic veins and that portion of the liver drained by them will become markedly enlarged and will give the impression of tumor. One recognizes also that thrombosis of the hepatic veins is ordinarily secondary to disease of the liver: usually cirrhosis, frequently primary hepatoma, and also metastatic carcinomatosis of the liver or liver abscess. It would not be inconsistent to consider asymmetrical subacute progressive thrombosis of the hepatic veins superimposed on cirrhosis and hepatoma,

Another possibility is that of simple neoplastic obstruction of the inferior vena cava. One could have that with bronchogenic carcinoma, where the inferior vena cava may be directly invaded. Sometimes the right atrium will be invaded and there will be obstruction of the vena cava, retrogressive into the hepatic veins. Also hepatoma often metastasizes through the hepatic veins into the inferior vena cava, the right side of the heart, and the lungs.

There have been reported cases of sudden death from pulmonary embolism of tumor masses from hepatoma. There is, of course, the classical obstruction of the inferior vena cava and pulmonary artery by adenocarcinoma of the kidney. Then there is one last tumor which spreads through the caval system and, though rare, tickles one.

The patient's scrotum was operated upon, and we have presumed that the "hydrocele" was simply ascitic fluid, but perhaps there was a tumor. Chorionepithelioma is the most hemorrhagic of tumors and is characterized by hemoptysis. The rapid and early development of ascites and collateral circulation are less readily explained on this etiological basis,

Heart From what we have in the protocol, I don't think that any primary disease can be ascribed to the heart. There is no suggestion of constrictive pericarditis nor of increased venous pressure. Blood flow was from below upward, so the superior vena caval pressure was essentially normal. Unrecognized mitral stenosis, tumors of the atria, and so on are too remote to consider seriously.

The terminal gallop is of interest because it is the one heart sound that really can be called "poor." It usually means an injured myocardium, a failing one, and it is always significant; usually those with it either die or have a limited life expectancy.

In our patient it could have developed on the basis of rapidly progressive pulmonary hyptertension due to pulmonary artery thrombosis or embolization. Also, there could well be bacterial endocarditis with the non-suppurative myocarditis which accompanies it in many instances. Finally, there could be definite and clean-cut staphylococcal and neoplastic metastases to the myocardium.

The variety of choice is tremendous, and I wish simply to bring it down to one diagnosis, one disease process, which would fit the patient's picture: subclinical portal cirrhosis complicated by primary hepatoma of the liver.

With a primary hepatoma, there would be subacute asymmetrical progressive thrombosis of the hepatic veins. pulmonary embolization (partly of blood clot, partly of neoplasm), and then terminal congestive hepatic failure. When one has occlusive disease of the hepatic veins, BSP retention will be extremely high, the flocculation tests will be greatly accelerated, and there will be rapidly progressive jaundice. In this patient, the defect in prothrombin activity, the positive flocculation tests, and the jaundice could be accounted for simply on the basis of severe congestion. Then there was terminal staphylococcal sepsis.

Pathology Dr. McGrew: When we saw this man he appeared rather emaciated, with edema of the legs and feet. He had 300 cc. of clear yellowish fluid in the peritoneal cavity, and 70 cc. of similar fluid in the pericardial cavity. Pleural adhesions were present bilaterally, and there were large lymph nodes which were firms and involved by tumor in the mediastinum.

The main lesion was found in the liver as had been predicted.

The liver was not much enlarged, since it weighed only 1840 Gms., but it was remarkably abnormal. The cut surface presented a variegated appearance with a yellowish-tan, irregular lobular pattern, and a reticular pattern of paler fibrous tissue throughout. There

were some nodules that were deeply bilestained, and others which may have been hemorrhagic. The entire right lobe was replaced by pale firm, somewhat friable tissue which appeared to be tomor. This involved many of the small veins, and was seen in the main branches of the hepatic vein as well.

A large thrombus, consisting largely of tumor tissue, and partially of thrombotic material, extended into the inferior vena cava.

Microscopically, the liver was markedly cirrhotic, with irregular lobules and considerable fibrosis. Mononuclear inflammatory cells were seen in the portal areas. There was an increased number of bile ducts.

The tumor was growing in extremely aggressive fashion, and around its periphery one could see compression and atrophy of liver tissue.

Under high magnification, one could see that the venous channels were filled with tumor, and that the cells had a tendency to form a cord-like pattern with some small ductal structures.

This is characteristic of an hepatocellular carcinoma.

Numerous mitotic figures were present, and the cells were poorly differentiated and highly pleomorphic.

The same type of cells, together with some blood clot, extended up the inferior vena cava, and the right ventricle was almost entirely filled with this thrombotic material which was loosely adherent to the wall at only a few points. Undoubtedly it had been giving off emboli at a great rate.

The tumor extended into the pulmonary arteries, and probably contributed to the terminal events it this man's course.

Earlier tumor emboli had produced

multiple tumor nodules seeded throughout the lungs, and most of the small as well as the large branches of the pulmonary artery contained tumor. Some of the earlier tumor emboli had sprouted and grown into large metastatic nodules, while others were more recently impacted in the vessels. In addition to considerable pulmonary edema, there were hemorrhages of the pulmonary parenchyma, and numerous pigmented histiocytes were evidence of old hemorrhage.

Atrophic Testes Neoplastic tissue also replaced and separated the striated muscle fibers of the diaphragm. The spleen was large, weighing 360 Gms., but this was chiefly due to passive congestion. It was suspected that peripheral discolored areas in the kidneys were infarcts, but microscopically these turned out to be accumulations of tumor cells, apparently spread from the lungs into the general circulation. The testis was atrophic, reflecting the chronic liver disease. More or less incidentally, there was a small hemorrhage in the cortical area of the left cerebral hemisphere.

Death was caused mainly by diffuse liver disease of fairly long standing, portal cirrhosis, with superimposed hepatocellular carcinoma developing more recently, spreading directly up the inferior vena cava into the right heart and into the lungs, and terminally beginning to involve the left circulation as well.

Questions

Question: Was there any evidence of staphylococcal infection?

Dr. McGrew: Positive cultures for the organism obtained from the blood during life were also obtained at autopsy, but there were no abscesses or evidence that the bacteria were causing specific organic lesions.

Dr. Roberg: There were no myocardial metastases?

Dr. McGrew: The chamber was filled with tumor, but the myocardium itself was not involved.

Question: Was there any evidence of the duodenal ulcer reported by the outside hospital?

Dr. McGrew: It was looked for, but none was found.

Question: How often is primary hepatoma this malignant?

Dr. McGrew: The degree of malignancy varies somewhat. I believe hepatomas generally grow rapidly in the liver and present a highly pleomorphic microscopic appearance, though distant metastases may be absent or insignificant.

Question: Would Dr. Roberg comment on the relative lack of abdominal symptoms such as nausea and vomiting with this much diffuse involvement of the liver?

Dr. Roberg: I think that nausea and vomiting and pain depend a great deal on the rate of progression of the disease. If you have gradually progressive cirrhosis and hepatoma, there will usually be diffuse pain. At the same time there is no particular reason for it to stimulate nausea and vomiting, which is either central nervous system in origin or is initiated by obstructive or inflammatory diseases of the digestive tract.

Question: Could the carcinoma have caused the anasarca by itself, and if so, was it merely on the basis of common association between liver carcinoma and cirrhosis that you decided there was also cirrhosis?

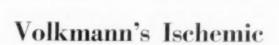
Dr. Roberg: Yes, because primary hepatoma has its chief association with cirrhosis. If one presumes that the mass in the epigastrium was liver, one would have to question why the right lobe of the liver did not lie more than 2 cm. below the costal margin. One suspects cirrhosis when an asymmetrical enlargement of the liver is found, since with chronic cirrhosis the fibrotic liver will not stretch, even in heart failure, for instance, while an abscessed or neoplastic area will enlarge. The rapid appearance of collateral circulation also suggests the possibility of cirrhosis.

Edema Calcium concretions Chalazion Hordealum (Sty) Blapharitis Marginalis

Cross section through upper eyelid showing areas in which eyelid diseases occur.

1180 MEDICAL TIMES

Office Surgery For The Ambulatory Patient



Contracture

Volkmann's ischemic contracture is one of the most serious complications of injuries about the elbow. It is a crippling deformity of the hand and forearm that is due to circulatory interference. Anyone treating forearm injuries must be aware of the possibility of the development of this tragedy, and guard against it,

Etiology Two thirds of cases occur in patients under the age of thirty, the greatest incidence being between the ages of two and sixteen. Swelling inside tight casts and constricting dressings is responsible for most cases. The majority follow fractures about the elbowparticularly incompletely reduced supracondylar fractures of the humerus (the commonest extension fracture of childhood). Brachial artery occlusion may be produced by hematoma and/or direct bony pressure on the artery. Fractures of the humerus higher up the shaft, fractures of the bones of the forearm, and dislocation of the elbow are occasionally responsible.

Other rarer causes are: a. damage to the brachial or axiliary artery from injuries other than fracture (e.g., gunshot wound, embolus, rupture, large hematoma, edema); b. subfascial hematoma due to rupture of an artery or hemophilia; c. trauma to the forearm (e.g., crush, cold exposure, prolonged pressure on the forearm while intoxicated, improper or prolonged use of a tourniquet or Esmarch bandage).

All of these causes produce reactive swelling in the closed flexor fascial compartment of the forearm (an inelastic fibrous box), with resultant ischemia of the muscles (Figure 1). Ischemia that persists for from six to forty-eight hours (depending upon its completeness) produces irreversible muscle damage with inevitable contracture. The flexor muscles are regularly involved, but swelling within a tight circular cast may affect the extensor muscle groups also.

Pathology After a period of ischemia, the muscles become indurated.

tense, and dark blue (from extravasated blood and serum), and degeneration and necrosis of muscle fibers supervene.

Within a few days, organization begins; the muscle fibers are replaced by fibrous tissue and the muscles become firm and adherent to the surrounding structures. Spasm may play a role in the ischemia, but this is probably of only secondary importance. Venous occlusion may also be a factor.

The flexor digitorum profundus and sublimus, and the flexor pollicis longus, are usually more extensively affected than the pronator teres and carpal flexors. The median and ulnar nerves are also constricted and may undergo degeneration.

In time, the fibrous tissue contracts; the muscles shrink and harden, and the characteristic deformity is produced:

- a. flexon of the wrist,
- b. hyperextension of the metacarpophalangeal joints,
- c. flexion of the interphalangeal joints, and
- d. pronation of the forearm (usually).

Since there is variability in the intensity of the circulatory interference, cases vary in severity.

Early Signs and Symptoms The onset is usually sudden, but may be insidious. Early signs of ischemia develop within two to six hours. Symptoms are: a. a feeling of tightness of the cast or dressing, b. restlessness, c. burning pain (often severe) in the hand or forearm, d. tingling and numbness in the hand and fingers. Signs are: a. paralysis of the flexor muscles with

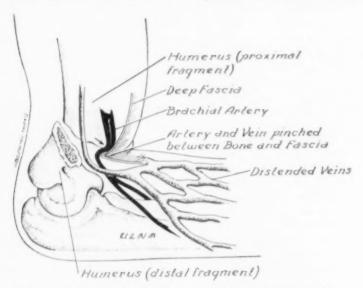


FIGURE 1. Schematic drawing showing the cause of Volkmann's Contracture in the case of un-reduced supracondylar fracture of the humerus. Posterior displacement of the forearm causes kinking of the brachial artery and veins between the bone and the deep fascia. Arterial flow to, and venous flow from the forearm are impeded. (Modified from Bunnell's "Surgery of the Hand")

inability to move the angers, b. pain on attempted extension of the fingers, c. coolness and pallor (arterial insufficiency) or cyanosis (venous insufficiency) of the hand, d. diminution of the radial pulse, and e. hyperesthesia of the fingers.

When the cast or constricting dressing is removed early, the forearm has a tendency to swell and become red, blebs appear, and pressure sores often develop.

After two days, the pain and signs of circulatory obstruction decrease. Later, a. the characteristic contracture develops, along with b. atrophy of the skin, hand muscles, and fingers, c. curvature of the nails, d. excessive cold sensitivity, e. diminished oscillometry and skin temperature readings. In about 60% of cases, glove anesthesia and paresthesias occur from nerve damage (median and ulnar). The end result is a crippled hand and forearm. In children, growth of the extremity is retarded.

Treatment

Prevention is the treatment of choice, and is almost always possible. Supracondylar humeral fractures must be correctly set early (Traction or operation may be required for this). Acute flexion of the elbow and pressure on the brachial vessels should be avoided. The antecubital space should be kept free inside a cast. Elevation of the extremity for several days following injury or operation is advisable.

Emergency Treatment, with the primary aim of restoring circulation, must be instituted as soon as the earliest signs or symptoms of vascular complication are recognized. Every injured arm should be examined every few

hours for several days. If any symptoms or signs appear, immediate hospitalization is mandatory, and consultation with a specialist is advisable. a. All encircling dressings (especially in the antecubital area) are freed (circular casts are split full-length along the medial and lateral edges, and the two halves are separated). b. The arm is elevated. c. If symptoms and signs are not promptly relieved, emergency operation is indicated. The flexor fascia is split over the length of the muscle bellies and allowed to gape. The vessels are freed. The skin is sutured to assure a closed wound. The fracture is accurately set. Pressure sores are excised and grafted primarily. d. Repeated sympathetic blocks may be of value. e. The wrist and fingers are splinted in full extension and maintained in this position until the muscles have returned to normal.

Late Treatment The difficulty of obtaining a good functional result after the contracture is established, points up the need for preventive treatment. a. Steady (not intermittent) spring or elastic traction to straighten the fingers should be used as long as some improvement is noted therefrom (several months). The traction appliances are removed three or four times daily for active and passive exercises. b. Sympathectomy is often helpful in relieving pain and improving the blood supply. c. Operative reconstruction is ultimately necessary. The flexor fascial compartment is opened fully, the septa are severed, the vessels freed, the fibrotic muscles excised, and the tendons freed and lengthened (This must be repeated with growth in children). The pronator teres and quadratus are severed if necessary to permit supination. The first

row of carpal bones may require excision to provide relative lengthening of the tendons. Fusion of the wrist in 20° of dorsiflexion is sometimes indicated to take over the function of the three extensor carpi muscles so that they may

be used for transfer.

Obviously, the reconstructive work is complex and requires considerable time and patience. No further word is necessary concerning the need for prevention of this tragic deformity.

Medical Advertising Course Offered at NYU

A fifteen-week workshop course on "Medical Advertising and Promotion" began September 30 at New York University's Division of General Education. The workshop offers specialized training in techniques for introducing and promoting ethical pharmaceuticals to the medical, dental, nursing, and allied professions. Conducted by Dr. Philip Reichert, the course meets from 6 to 7:45 p.m. on Mondays at NYU's Washington Square Center.

The only university course of its kind in the country, according to Dr. Reichert, it is intended for those who wish to specialize in this growing field. The workshop covers such topics as developing and introducing new products.

The only university course of its kind in the country, according to Dr. Reichert, it is intended for those who wish to specialize in this growing field. The workshop covers such topics as developing and introducing new products, library research, selection of art, and evaluation of the medical market.

Dr. Reichert, who originated the NYU course last year, recently retired as vice president and director of the professional division of a New York advertising agency.

Further information on the course can be obtained from the Division of General Education, New York University, Washington Square, New York 3, New York.

EDITORIALS

A Great Clinician Sets A Pattern for Us

The fame of Richard Bright (1789-1858), whose name has for a hundred years been familiar to everybody when disease of the kidneys was under consideration, has been dimmed by very reason of his special association with nephritis, for his renal researches were the least of his clinical accomplishments, although the most giamorous. We tend to forget that he distinguished between cardiac and renal dropsy and first described pancreatic diabetes and pancreatic steatorrhea, acute yellow atrophy of the liver, Jacksonian epilepsy and lymphaticus, the pulmonary changes in whooping-cough, echinococci in the interior of hydatid cysts, and the bruit of the heart in chorea.

Personally, Bright was an accomplished artist, an able botanist and geologist and "a simple, unprejudiced, truthloving man." He made striking plates of the pathologic appearances in typhoid fever, nephritis, acute yellow atrophy of the liver, and cerebral disease. Altogether he was one of our medical giants (or, if you like, medical gods).

The Brights of medical history set tough patterns for our present-day clinicians to follow, but we are happy to declare that they are living up to our expectations.

The Search for New Light on Cancer

Dr. John R. Paul, of the Yale University School of Medicine, reporting in the Scientific Monthly (September, 1957) on the American Mission to the Soviet Union, states that "Also high on the list of priorities is the field of cancer research. This commands great attention. Several institutes are wholly devoted to research on malignant tumors, which concerns investigations regarding the causes of cancer, the possibility that a virus plays some part and a variety of methods of therapy, ranging from x-rays to the use of plant extracts."

If America is to be the discoverer of

new light on the nature and control of cancer we must not permit Russia to preempt the field. The prestige involved is nothing short of tremendous.

Call for a Sex Revolution

Pitirim A. Sorokin, Harvard sociologist, warns in his The American Sex Revolution (1956) that we are doomed to go the way of Greece and Rome unless we renounce our "mad obsession with sex." He thinks Freud and Kinsey have confused us badly.

Sorokin points to the evidences, as he sees them, of our sex madness: one divorce for every 34 marriages: one married woman in every 25 deserted by her husband; 10 million children deprived of one parent. These are all reflected in our literature, television, radio, music and advertising. Promiscuity has increased and there is a drift toward "sex anarchy." Many authors display the erotic excesses of their characters as "perfectly normal"; they are considered by such authors as "enjoyable adventures in the monotonous existence of modern men and women. Sometimes such illicit relationships are described as a commendable liberation from the antiquated marriage bonds." Sorokin declares that "The sham literature of our age is designed for the commercial cultivation, propagation and exploitation of the most degraded forms of behavior." There is "a new religion of eroticism." This stuff has exposed us all to its "deadly radiations." Even the field of

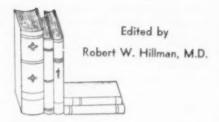
religion has been infiltrated, producing what Sorokin calls "religious schizophrenia."

Medicine's concern with all this has to do with its relation to the threat to national health and vitality. How can there be a dynamic flowering of the environment unless only socially sanctioned relationships are permanent in the sexual sphere? Sorokin pleads for a devotion to the basic values of life.

Hodgkin — the Man

It is interesting to study the personalities of some noted members of the medical profession. Thomas Hodgkin (1798-1866) belonged to this category. Hodgkin was a member of the Society of Friends, "always wearing their characteristic dress." He was a born philanthropist and reformer and gave up practice in order to concentrate on such activities. But he was a great clinician who described aortic insufficiency three years before Corrigan's classic paper on the subject. His "eccentric independence of spirit" cost him his post at Guy's Hospital. Although Malpighi had vaguely outlined the condition marked by enlargement of the spleen and lymphatic glands, or lymphadenoma, in 1665, it was Hodgkin's work in 1832 which immortalized his name and created a genuine nosological entity. His Lectures on the Morbid Anatomy of the Serous and Mucous Membranes (1836-40) is one of the earliest English treaties on pathology.

Medical Book News



Endocrinology

Androgens. Biochemistry, Physiology, and Clinical Significance. By Ralph I. Dorfman, Ph.D. & Reginald A. Shipley, M.D. New York, John Wiley & Sons, [c. 1956]. 8vo. 590 pages, illustrated. Cloth, \$13.50.

This treatise is written by a foremost steroid biochemist in collaboration with a clinician. It includes all phases of androgen studies and should be in the library of all interested in androgens. As the authors state "it compiles, summarizes and evaluates the available literature on the male hormones and related steroids".

BERNARD SELIGMAN

Water and Salt Metabolism

Clinical Recognition and Management of Disturbances of Body Fluids. By John H. Bland, M.D. 2nd Edition. Philadelphia, W. B. Saunders Company, [c. 1956]. 4to. 522 pages, illustrated. Cloth, \$11.50.

Not only is the second edition of this book as complete as the original issue, but it is much better organized. The opening chapters deal with the fundamental concepts of fluid, electrolyte, and acid-base homeostasis. These also include descriptions of the pathophysiologic processes involved in the development of refractory edema, electrolyte depletion and hydrogen ion disturbances.

The book then continues with detailed discussions of specific clinical entities. In a very concise manner it presents the common problems of the circulatory, hepatic, renal and endocrine systems as well as special sections devoted to the care of burns and the postoperative state. Bedside and laboratory findings are clearly presented and practical methods of management are stressed and explained.

I. S. FRIEDMAN

Medical Ethics

Should the Patient Know the Truth? A Response of Physicians, Nurses, Clergymen, and Lawyers. Edited by Samuel Standard & Helmuth Nathan. New York, Springer Publishing Company, [c. 1955]. 8vo. 160 pages. Cloth, \$2.00 soft cover; \$3.00 hard cover.

This is a timely and well written small book. It discusses a question that confronts every physician many, many times. Unfortunately, it cannot solve the problem, for each must meet the situation on the basis of experience, philosophy, background, and most important, the case at hand. It is because of this that the book is not a solution. With one exception, there is remarkable unanimity of opinion from people of different back-

Important:

ROENTGEN MANIFESTATIONS of PANCREATIC DISEASE

By MAXWELL HERBERT POPPEL, M.D.

Professor of Radiology New York University Post-Graduate Medical School

"The author presents all the facets in a most detailed and yet modest way. This is a very intelligent book, admirably combining radiology with anatomy, physiology, and pathology. Its illustrations are excellent."—The Lancet

"This book will clearly be a standard work for many years to come."—British Medical Journal

"The appreciation and correlation of the roentgen manifestations permit a crystal-lization of ideas which help to reflect the underlying basic pathological mechanisms in their various static and dynamic sequences. This often permits a pathologic translation, thereby harmonizing the diagnosis with the actual disease."—The Review of Gastroenterology

"In the complex problem of diagnosing pancras affections the roentgenologist can be of valuable assistance to the clinician. Just what the roentgen methods are capable of achieving in this field has been compiled for the first time and is presented authoritatively and critically and at the same time concisely and completely in this volume."—New York State Journal of Medicine

406 pages

218 illustrations

\$10.50, postpaid

CHARLES C. THOMAS . PUBLISHER

Springfield, Illinois

grounds and professions. The consensus seems to uphold the basic medical ethic, "prima nocere."

PAUL I. KEARNEY

Psychosomatic Medicine

The Psycho-Medical Guide. To a Lifetime of Good Health. By Curt S. Wachtel, M.D. New York, Psycho-Medical Library, [c. The Author, 1956]. 8vo. 318 pages. Cloth, \$5.00.

The author is a practicing physician who has been interested in psychosomatic medicine and has written about it for over thirty years. In this work he has drawn freely on his experiences and has written a very readable book.

It is his hope that it will permit "patients with problems to understand their physiicans at once and save them time consuming sessions in which the doctor would have to explain the meaning, purpose and promise of psychosomatic procedures". But one wonders if his enthusiasm has not carried him away when he states in the introduction that "many of them (patients) who do not respond to the traditional methods of treatment can be cured by psychosomatic medicine".

This book is obviously intended for people who have emotional disturbances, though doctors who have very little understanding of psychiatry will find the non-technical presentation of the inner processes by which emotional and mental activity are transformed into bodily symptoms well worth the reading of this book. The illustrative case histories will tend to reassure the emotionally disturbed person, but psychiatrists and psychoanalysts will find much to criticize in the validity of many of the statements made by the author.

JOSEPH L. ABRAMSON

Oral Pathology

Krankheiten der Mundschleimhaut und Der Lippen. By Hans Scheuermann, M.D. Munich, Urban & Schwarzenberg, [1955]. 8vo. 175 pages, 90 illustrations, Paper, 24 marks; Cloth, 56 marks.

Although many specialties in medicine claim the oral cavity as their own domain, knowledge of the different lesions of the lips and mucous membranes is relatively scant. This book will be a great help, not only to the dermatologist, E. N. T. man, and dentist, but also to the general practioner. In a concise form, with small text illustrations at the beginning of each chapter, the book discusses a tremendous number of diseases that in any way leave their mark in this area. One quarter of the book is devoted to lesions due to infections by bacteria, virus, or fungi, Other chapters deal with lesions in dermatoses, blood dyscrasias, collagen diseases, with benign and malign tumors and other mouth conditions.

ALFRED J. EPHRAIM

Surgery

Christopher's Textbook of Surgery.
Edited by Loyal Davis, M.D. 6th
Edition. Philadelphia, W. B. Saunders
Company, [c. 1956]. 4to. 1,484 pages.
1,359 illustrations on 716 figures.
Cloth, \$15.50.

This work appears as the sixth edition. It is made up of 1,484 pages, with 1,359 illustrations on 716 figures. The first 22 pages are devoted to a History of Surgery, by Allen O. Whipple, M.D. There are approximately 87 contributors, each one an accomplished surgeon in his own field. The book has been brought entirely up to date; all obsolete illustrations and portions of the text

which have become outdated have been omitted and the subject matter has been carefully edited and rewritten. Many entirely new subjects by new contributors have been added. This is the latest model of the same fine book with which we have all been familiar since the original edition appeared in 1936. It is highly recommended to all surgeons.

MERRILL N. FOOTE

Physiatry

Handbook of Physical Therapy. By Robert Shestack, P.T.R. New York, Springer Publishing Company, [c. 1956]. 8vo. 212 pages, illustrated. Cloth, \$4.25.

This book is exactly what the author calls it, "a handbook". It consists of four parts. Part I covers a brief history and methods of prescribing physical therapy. Part II is a description of the usage of the physical forces in medicine, ranging from radiant heat to massage and exercise, with different sections on diathermy, low voltage currents, ultrasound, and hydrotherapy. The author too briefly describes the physics and the physiology of these various forces indicating clinical applications and contra-indications. The section on low voltage currents, including the description of tests for reaction of degeneration, is extremely well done for a small handbook of this type. The author, unfortunately, did not include other simple diagnostic procedures in common usage, such as strength duration curves, chronaxy measurements, and electromyography. The knowledge even to a limited degree of these aforementioned procedures is rather important to those who might find use for a book such as this. Some excellent charts on the motor points are included in this

section. These, incidentally, are the only illustrations in the handbook, which is one of its shortcomings. Part III, which describes physical therapy for medical conditions, is rather brief and stereotyped, and leaves room for considerable difference of opinion as to some of the procedures outlined. The author is aware that no distinct pattern of treatment can be outlined for any one particular patient but attempts in a discussion of the various pathological conlitions to arrange them in some orderly process so that one can become selective. The section on exercises is rather well described but could have been made much more useful by schematic drawings and photographs. There is a well outlined section on "movement produced by muscles", which again would have proved much more useful to the reader if nerve innervation were included in the description.

This handbook should be extremely useful to physical therapy students, recent graduates of physical therapy, nurses, and general practitioners who utilize simple routine physical therapy in their offices.

SAMUEL G. FEUER

Hematology

The Morphology of Human Blood Cells. By L. W. Diggs, M.D., Dorothy Sturm and Ann Bell, B.A. Philadelphia, W. B. Saunders Company, [c. 1956]. 4to. 181 pages, illustrated. Cloth, \$12.00.

This atlas has exceptionally fine artist's drawings in color by Dorothy Sturm along with some excellent black and white photomicrographs. The arrangement is simple, logical and complete so that quick reference is possible. The text is purely descriptive with no attempt to discuss disease states. This book can be highly recommended to those for whom it was intended: medical students, medical technologists, and all those interested in examining blood and marrow films.

R. JANET WATSON

Biochemistry

Clinical Biochemistry. By Abraham Cantarow, M.D. & Max Trumper, Ph.D. 5th Edition, Philadelphia, W. B. Saunders Company, [c. 1955]. 8vo. 738 pages, illustrated. Cloth, \$9.00.

The original purpose of correlating biochemistry with clinical medicine has been admirably achieved by the authors in this 5th edition. The great strides which have been made in both biochemistry and medicine have made it necessary to completely rewrite the book with new material on the subjects of liver function, kidney function, plasma protein abnormalities, iodine metabolism, lipoproteins, potassium metabolism, acid-base balance and endocrine function, particularly thyroid and adrenal.

The chapter on carbohydrate, for example, deals not only with the biochemistry of carbohydrate, but its metabolism in the organism, its utilization, degradation, metabolic interrelationship, endocrine influences on its metabolism and its role in disease states. So are the other components treated, such as proteins, nucleic acids, hemoglobin and all the inorganic elements.

The last section of the book deals with the applied physiology of gastric, pancreatic, hepatic, and renal function and stresses particularly the biochemical and metabolic disorders that occur in diseases of these organs.

It is one of the best books in biochemistry as it relates to medical practice. W. S. COLLENS

Psychiatry for

Non-Psychiatric Physicians

SAMUEL SILVERMAN, M.D.

References have appeared in the medical literature concerning the number of patients who turn out to have an emotional illness rather than the physical disease which was first suspected.

The patients may be those seen in private practice, in a clinic, or in a hospital ward.

If the percentage quoted is high, it is used to indicate the need for the general practitioner or non-psychiatric specialist to have some post-graduate psychiatric training. If the percentage is low it is used to prove the contrary.

It seems to me that these percentages are irrelevant to the issue and tend to obscure more basic and substantial reasons which indicate the need for such training.

First of all, it is not really a matter of emotional versus physical illness. Every person who becomes ill reacts emotionally to his illness.

In a very general way it can be said that a sick person is less interested in the outside world, more interested in himself, more anxious or depressed, more dependent and less secure than he ordinarily would be.

To be sure, these reactions may be minor and transient. However, often enough they may assume more significant proportions,

Let us consider just a few brief examples: the patient with coronary disease who becomes immobilized with fear when he is told about his sickness; the amputee whose post-operative discouragement seriously interferes with the rehabilitation program outlined for his return to a useful life; the patient whose convalescence from infectious hepatitis or atypical pneumonia is prolonged many months after all tests have returned to normal because of a mild but persistent depression.

Then there are the patients who are afraid of doctors, of hospitals, of various laboratory procedures, of medication, and of operations.

Certainly they cannot all be referred to psychiatrists for treatment of their emotional disturbance, nor in fact do most of them need to be.

However, these distress reactions to illness are not the only kind of emotional process that the physician encounters in his patients. A sick person, treated over a period of time, tends to develop an emotional relationship with his physician. Although the development of this relationship is usually a gradual one, it may sometimes take place more quickly and intensely.

The doctor in this emotional relationship frequently represents a figure of the patient's past—a kind or harsh parent or sibling surrogate, and the patient's reactions to him will be conditioned to a certain extent by this phenomenon of transference.

Often, transference reactions play a significant role in how the patient and physician actually get along together and in how the patient responds to the treatment.

If the patient sees his physician as a kind and powerful figure, he may react more favorably and more quickly to the physician's reassurances, suggestions, and prescriptions. Likewise, the patient's anxiety or guilt feelings—heightened by his illness—will more quickly diminish.

The opposite may occur if the doctor is seen as a figure that is cold and rejecting, one to whom the patient reacts with distrust and lack of confidence.

Of course, physicians may actually be kindly or rejecting; one should be careful not to ascribe a patient's emotional reactions to his physician as being due only to transference!

A third group of emotional factors with which the non-psychiatric doctor should be familiar are those related to or connected with the development of physical disease.

There is a growing body of knowledge which indicates that such diseases as asthma, peptic ulcer, rheumatoid arthritis, colitis, hayfever, neuro-dermatitis and hypertension have a large emotional component, though the relationship of this component to the physical

process has yet to be worked out more exactly.

It has also been noted that in many other illnesses there is a striking correlation between emotionally traumatic experiences and the onset of the disease. Here again, the more specific role that emotional factors play in connection with other determinants in the development of disease remains to be clarified.

All too often, however, the role of these emotional components is either disregarded altogether or exaggerated in importance,

It is neither correct to say that nothing of clinical value is known about these emotional factors, nor on the other hand that they are etiologically most significant.

Actually, what is known about them can be practically applied from a clinical standpoint without the need for exaggerated claims in either direction.

Admitting that all this is quite true, it neight be argued that nowadays all medical schools have courses in psychiatry and every doctor has some instruction in the subject, thus raising a question about the need for any postgraduate follow-up.

While the non-psychiatric doctors may have some recollection of the subject-matter of psychiatry from medical school, it is often superficial and, in any case, retained as something theoretical. Internship and residency training may or may not afford an apportunity for the non-psychiatric physician to implement and consolidate his knowledge of psychiatry.

In any event, certain physicians will enter practice without a sufficiently useful and clinically applicable working knowledge of psychiatry. All too often I have heard such physicians say: "If only we could have had some practical post-graduate psychiatric instruction, then we wouldn't feel so blocked, so thwarted in knowing what the patient's emotional reactions mean and what can be done about them."

How can such instruction be organized and made worthwhile from the non-psychiatric physician's point of view? First of all, these post-graduate courses in psychiatry have a better chance of being successful if the impetus for their organization comes from physicians who are really interested in and strongly feel the need for this further training. Such a group of physicians will be unified by their common objective and can then undertake to explore the availability of both teachers and clinical facilities.

It is next necessary to consider what would be an adequate course of psychiatry for the non-psychiatric doctor. It may be said in a general way, that an adequate course is one that is geared to a level of understanding and clinical application most suitable for the needs of the particular group to be taught. In other words, the psychiatric subject-matter should make sense to the physicians and likewise should be of practical value in the treatment of their patients.

A non-psychiatric physician should be able to recognize the major psychoses and neuroses, but his knowledge of psychiatry should not be confined to this descriptive level. Of much more value to him are the basic dynamic psychiatric concepts which he can utilize in a practical way to understand the emotional reactions of the person he is treating, the interpersonal relationship between himself and that person, and the psychotherapeutic measures that he can use in the service successfully treating not only the illness, but the person in whom the illness occurs.

In my opinion, particular care should be exercised in the selection of teachers for such courses in psychiatry. The subject-matter of psychoanalytic psychiatry, when taught to physicians primarily interested in other disciplines of medicine, requires a certain skill and competency in the instructor for its successful communication.

Psychiatrists who have themselves been psychoanalyzed, who have a wellgrounded dynamic orientation, who have a particular interest in psychosomatic medicine who show an aptitude for coping with the problems that may arise in connection with the students' emotional responses to the subject-matter, and who are aware of the limited goals involved, would be best suited—if available!

It seems to me that courses of psychiatric instruction can least effectively be taught by lectures presented by a number of different psychiatrists. Dry talks and "dry clinics" may leave in the doctor audience only a residue of jargon and the conviction that psychiatry is just words and words.

The principles and concepts that are taught need to be demonstrated clinically in patients.

Discussions are of particular value and most stimulating when they develop from the clinical material which the doctor sees and hears first-hand. Preferably, discussion groups should be as small as possible. Likewise, wherever possible, the same psychiatrist should work in regularly scheduled conferences with the same group of doctors over a period of time. This can make for better rapport between in-

structor and pupils which in turn will favor the success of the teaching process.

The frequency with which the teaching conferences will be held will, of course, depend considerably on the special circumstances of each particular group. The important factor here is continuity, which again not only favors the growth of rapport between instructor and pupils, but also allows for better development and retention of the material to be taught.

I would like to underscore the importance of teaching broad concepts and principles of psychoanalytic psychiatry rather than specific details. Let us see how this would apply in the very important matter of obtaining information about the patient's emotional life. It is one thing to say that a physically ill patient appears to have emotional difficulties. It is quite another matter to be able to find out more specifically what the emotional factors are, how they are related to the presenting symptoms or illness, and finally, how to utilize this information within certain optimal therapeutic limits.

I have found that interviewing patients for this purpose is a procedure about which many misconceptions still exist in house officers and in physicians who are in private practice. For instance, some physicians consider such an interview the same as a conversation. Others think of it as a series of random questions which will somehow reveal the necessary information. Still others feel that intangibles are involved which cannot be investigated, etc.

While there are many techniques of interviewing and, in turn, of psychotherapy, it is difficult and unprofitable for the non-psychiatric doctor to try to learn specific technical details about them which often lead only to confusion—or at best—mechanical and unprofitable application.

On the other hand, broad dynamic concepts and principles are better understood and retained and can then be used as much or as little as the individual doctor's interest, abilities, and further experience in this sphere will permit.

Let us consider briefly what concepts could be useful in learning how to obtain information from a patient about his emotional life.

These might include a basic understanding of the existence and significance of unconscious mental processes, a general idea of how interacting and counteracting mental forces produce conflict, some knowledge of the role of repression and under what circumstances emotional symptoms develop, and some understanding of the phenomenon of transference.

These concepts would, for example, help to explain why an interview cannot be a conversation, why there are blocks to the patient's readily recalling and understanding the causes of his emotional problems, why it is necessary to lessen these blocks and under what circumstances this is possible.

They would also explain why certain principles, such as the following, need to be kept in mind in order to do interviewing successfully.

One should start with the patient's symptoms and proceed toward a limited goal. This goal would be to obtain data about the patient's emotional life which is related to and affords some further explanation of the patient's illness and symptomatology.

The obstacles between starting point and goal can be lessened or modified by letting the patient's thoughts in relation to his symptoms come out without interruption, by helping the patient to elaborate on these thoughts and their ramifications.

Under the beneficial influence of a positive interpersonal relationship the patient's resistances will further be decreased, and thoughts otherwise held under censorship will be able to enter his awareness.

In the process of interviewing, the physician should be benevolently neutral, should be able to listen without interrupting, without judging, and not for specific details so much as for common denominators and repetitive patterns.

This, then, is an example of how a knowledge of dynamic psychiatric concepts and principles can help the nonpsychiatric physician to become familiar with an approach to interviewing for psychological data which can be systematic and meaningful.

Many clinical instances can be cited of how a working knowledge of applied psychiatry can be of help to the nonpsychiatric physician. Limitation of space permits presentation of only a few brief examples,

A 19-year-old, tactiturn, shy boy had a number of hospital admissions for diabetic coma. Each time he is carefully worked up from a physicial standpoint, regulated, and discharged.

The reason for the recurrent diabetic crises remains a mystery until one of the house officers on the patient's next admission takes some time and expends some effort in winning the patient's confidence. The patient, for the first time since he has been treated for his illness, feels able to really talk with his doctor. It then becomes possible to gain some

information about the patient's personal life which could have a bearing on the exacerbations of his illness.

The following facts become clear. The patient is unable to follow his diet and neglects taking his insulin regularly whenever he and his parents quarrel, which is frequently. He feels rejected, unwanted, a burden on them, and then find he gets intolerably nervous unless he can eat large amounts of food. He quarrels with his parents particularly when he feels that they are paying more attention to a sibling several years younger, of whom he has always been very jealous.

Under the favoring influence of a positive relationship which develops between himself and his doctor, he is helped to feel less rejected. In turn he is gradually able to gain some understanding of his behavior and attain some control over it.

His doctor talks with the boy's parents and obtains their cooperation in trying to adopt a different attitude toward their son. The outcome is a patient, who, of course, still has diabetes, but whose emotional life has become somewhat more favorably adjusted. As a result, the boy is better able to follow the diet and insulin dosage prescribed by his doctor.

Several hours of applied psychiatric knowledge have paid off in the prevention of recurrent severe illness and possible fatal outcome.

A 40-year-old, single woman is seen for increasingly recurrent "flareups" of a neurodermatitis, She responds poorly to the usual treatments. She has a considerable need to talk to someone about herself but has been rebuffed in one way or another in the past when she tried to talk to her doctors. They have

told her that her "nerves" have nothing to do with her sickness.

She finally enters treatment with a physician who recognizes her desperate need to unburden herself emotionally to a sympathetic listener.

The patient reveals something of her unhappiness. She lives with her invalided mother whose sole support she is. This arrangement has existed for several years, forced upon her by the other siblings, who had always taken advantage of the patient's difficulty in standing up for her own rights. Whenever her mother has an exacerbation of her illness, the patient becomes very anxious, anticipates her mother may die. The mother is a dominating and demanding person who expects the patient to have no interests other than the mother. Whenever the patient has thoughts of leaving her mother, she feels very guilty. Anger toward the other siblings has been largely repressed. As she builds up unconscious rage, her tension increases, her symptoms of itching become worse, and her need to scratch intensified. The lesions become excoriated and secondarily infected. The patient has a fullblown flare-up.

Just being able to tell a sympathetic listener about her trouble gives the patient considerable relief from tension. As she is helped to become aware of her repressed rage and relate her feelings of anger to the non-judging doctor, her feelings of guilt are modified and her tension lessens. The flare-up subsides. The patient is able to consider plans for the future which will help her to free herself to some extent from her emotional entanglements.

A 55-year-old man has just had a subtotal gastrectomy for a peptic ulcer. His recovery physically is unusually slow, and he appears quite depressed. The doctor in charge of the case is alert to the patient's emotional state, gives him some extra attention, and gradually encourages the patient to talk about himself.

He learn about the patient's concern for the future. The patient has been a hard-working man, providing for his family, but having no interests outside of his work and home. He has always been a self-conscious, sensitive person able to escape from his emotional problems only by keeping busy and on the go.

Now there has been a piling up of disturbing events. The operation has left him feeling physically shaky and quite fearful of being unable to return to an active life. The last of his children has just left the home. He sees himself a lonely old man, unable to provide for himself and his wife. A sense of loss and inadequacy is threatening to break down his previously adequate defenses.

His physician recognizes the need to avoid any deep exploration of the patient's emotional life. Instead, with reassurance, emotional support and a gradually increasing program of activity, he helps to strengthen the patient's weakened defenses. The patient is discharged, much improved both physically and emotionally, able to resume a work schedule which will still give him a sense of adequacy and at the same time be within the limits of his physical capacity.

A 50-year-old, married woman has been suffering from frequency and dysuria for many months. She has consulted several physicians who have made the diagnosis of mild cystitis, treated her condition vigorously with cauterization and medication and left her with increased symptoms.

She tries one more physician. Careful physicial examination and laboratory studies reveal but little organic disease, insufficient to account for the severity of her symptoms. However, the physician has noted that the patient, on her own, emphatically emphasizes that she has no worries, nothing to make her unhappy except these symptoms.

He wonders about these protestations, considering the possibility of their masking inner tensions.

It soon becomes apparent that the patient is using the mechanism of denial to defend herself against recognition of painful thoughts. She is helped to become aware of this. She begins to speak, though at first in a deprecating way, about some difficulties that exist in her marital life. The patient then gradually unfolds a story of disappointment in her husband, and of chronic irritation with him. She has been accustomed to forcing her feelings out of her mind, ever since he had threatened to leave her if she criticized him in any way.

Bit by bit the patient becomes aware of her chronic annoyance. As she is able to express her feelings in a more forthright fashion to the physician and examine them more objectively with his help, her formerly masked tension decreases and her physical symptoms likewise improve.

As these examples indicate, the nonpsychiatric physician does not aim for resolution of basic conflicts, nor even for the development of extensive insights. Nevertheless, by utilizing the supportive forms of psychotherapy, implemented from time to time with a limited type of insight approach, the patient's tensions may be reduced, anxiety and guilt sufficiently modified to give considerable emotional relief and produce a beneficial effect on the course of the patient's physical illness as well.

So far the emphasis in this presentation has been in the direction of the importance of recognizing emotional components, understanding them, and being able to do something about them.

However, psychiatric instruction can also teach the physician when not to explore for emotional factors, or when to approach these only in a limited way.

There are times when a patient's emotional defenses should either be left as they are or strengthened.

The physician should also be able to recognize when he has gone too far in his search for emotional components. I am reminded of a patient with severe headache for which no organic basis could be found. This patient was interviewed by her internist "not wisely but too well." Before two interviews had elapsed, he had informed the patient that she had death wishes toward her father, was a latent homosexual, etc. Result: panic.

The patient had to be referred to a psychiatrist for emergency treatment to relieve the severe anxiety that had been stirred up.

Unwise handling of a patient's emotional needs may come about in another way. Some physicians' idea of taking care of the patient's emotional problems is to tell the patient to relax, to take it easy, to take a vacation—in other words to have pat formulae which are mechanically applied under the guise of a psychotherapeutic intervention.

Sometimes this may have repercussions, as in the following example. A patient had had a bout of rheumatoid arthritis from which he was making an excellent recovery. He had, however, developed some anxiety. His physician recognized that the patient was under tension but did not look into the matter any further. Instead he advised the patient on discharge that all the patient needed was to take a vacation for several weeks and he would get over his nervousness.

The patient's tension, however, was related to some unrealistic fears about money matters which could have been easily straightened out in several short interviews.

As it was, the patient spent the two weeks worrying about finances and literally kept running from his home to the bank, to the insurance company, etc., trying to stave off what he needlessly thought would be financial ruin.

At the end of the two weeks' vacation,

he was readmitted to the hospital, exhausted and ill again.

To sum up, psychiatric instruction can help the non-psychiatric physician, first, to be alert to the various ways in which emotional factors play a role in physical illness; second, to be able to listen if the patient talks about these, or to be able to help the patient bring out these emotional factors; third, to make the information obtained from the patient meaningful; and, fourth, to be able to use this information for therapeutic purposes within certain optimal limits in the treatment of the patient's symptoms and illness.

Competently taught, adequate courses of dynamic psychiatry can at least give the interested and willing physician a broad introduction to the development of these skills.



Foreign Doctors and Licensure Requirements

Each state of the United States has established its own regulations for licensing physicians to practice medicine within its boundaries. For the U. S. medical school graduate, rules are much the same from state to state. But for the graduate of a foreign medical school, there are important differences. As a matter of interest to our readers the editors will present, from time to time, various state licensure requirements as they concern foreign graduates.

Licensure for Foreign Graduates in California

The California Board does not approve any foreign medical schools but considers each application as it is filed.

An applicant whose application is based on a diploma issued to him by a foreign medical school, except a Canadian school, must furnish documentary evidence, satisfactory to the California Board, to support the following:

- He has completed, in a medical school or schools, a course of professional instruction equivalent to that required in California medical schools.
- He has had issued to him by such medical school, a medical diploma, as evidence of the completion of the course of medical instruction.

Graduates of medical schools located in foreign countries will please bear in mind that the word diploma as used here refers to a document issued by a medical school after completion of the medical course, and is termed in most countries as a doctor of medicine diploma. Graduates of foreign medical schools often refer to their license to practice medicine as a "diploma." The latter document is known in the United States as a medical license, not a diploma.

- He has been admitted or licensed to practice medicine and surgery in the country where he completed the courses of professional instruction required.
- The country in which he has been licensed to practice medicine and surgery will admit to practice citizens of the United States upon proof of prior admission to practice medicine and surgery in some state of the United States,

or upon proof of matters similar to the requirements in this section for graduates of foreign medical schools.

Translations All credentials from foreign institutions must be translated into English by the consul and over the seal and signature of the consul of the country where such documents may have been issued. Consul must certify that the institution is recognized or approved by the authorities in the country in which it is located.

English translations must be attached to each document in a foreign language.

California Training Applicants under this section must serve at least two years in a service satisfactory to the California Board in a hospital or hospitals located in the United States and approved by the Board for the training of interns. One year of this training must be in a hospital in California.

Before a certificate may be issued, the applicant must also pass a written examination prior to commencing an internship in a hospital in California, and must also pass an oral and clinical examination upon satisfactory completion.

The Board may disapprove any foreign medical school or deny any application if, in the opinion of the Board, the instruction received by the applicant or the courses completed were not equivalent to that required in this article for a physician and surgeon applicant.

U.S. Citizens An applicant who at the time of his application and at the time he commenced his resident course of professional instruction was a citizen of the United States and whose application is based on a diploma issued to him by a foreign medical school, except a Canadian school, shall furnish documentary evidence, satisfactory to the Board, of the following:

 He has completed in a medical school or schools a course of professional instruction equivalent to that required in this state for a physician and surgeon applicant.

 He has had issued to him by such medical school, a medical diploma, as evidence of the completion of the course of medical instruction required.

Applicants under this section must serve at least one year in a service satisfactory to the Board in a hospital located in the United States and approved by the Board for the training of interns. Before a certificate may be issued, the applicant must also pass a written examination prior to commencing an internship in a hospital in the United States, and must also pass an oral and clinical examination at the satisfactory completion of the internship.

The Board may disapprove any foreign medical school or any application if, in the opinion of the Board, the instruction received by the applicant or the courses were not equivalent to that required in this state for a physician and surgeon applicant.

Every applicant for permission to intern in a hospital must file satisfactory documentary evidence showing the following education qualifications:

- Preliminary education. A diploma from a four-year California high school, or its equivalent.
- Premedical education. A threeyear, college level course, including the subjects of physics, chemistry and biology, before commencing the course of professional instruction in medicine.
- 3. Professional education. A medical curriculum extending over a period of at least four academic years in a medical school, the course of study totaling at least 4,000 hours education in the

subjects specified. (See Business and Professions Code of California.)

If the applicant has studied in more than one medical school, he must file a satisfactory Certificate of Medical Education, showing subjects, courses and number of weeks completed, certified by the proper officer of each medical school attended.

Reciprocity A foreign medical school graduate, whose application for admission to practice in California is based upon a certificate issued by the medical licensing authority or some other state, or is based upon a diplomate certificate issued by the National Board of Medical Examiners of the United States, must show that at the time he was issued the certificate, he had fulfilled all the qualifications of the California Law in effect at that time concerning graduates of foreign medical schools.

In addition, if qualified, he must take and pass an oral, clinical and written examination.

For further information write to: Secretary, Board of Medical Examiners, Sacramento 14, California.

AN EXERCISE IN DIAGNOSIS— THE CASE REPORTS

IN addition to our regular quota of original articles, "Refresher" articles and departments, this issue, and every issue, contains selected Case Reports. You will find them on pages 1174-1180. We recommend these studies as interesting and stimulating.



University of Educational

The University of Illinois Research and Educational Hospitals in Chicago, Ill., are the primary clinical teaching facility of the University's College of Medicine.

The Hospitals are a part of the vast Illinois Medical Center District comprising the largest hospital and medical education complex in the nation. The District currently contains more than 5,200 beds (with 800 others being added), three medical schools, two dental colleges, a school of pharmacy, three nursing schools and a myriad of medically related and oriented activities. Total valuation of its physical plant components is in excess of \$175 million.

Within the framework of this concentration of health facilities, "R and E," as it is colloquially termed, is composed of a number of institutions which are organized into a functional hospital unit of 620 beds and 40 bassinets.

Units The first building of the present "R and E" group was the General Hospital, completed in 1925 as a facility of the State of Illinois Department of Public Welfare and designed to serve the needs of the indigent sick in Illinois. It contained in-patient services of medicine, surgery, pediatrics, obstetrics and

Illinois Research and Hospitals

With a remarkable autopsy percentage year after year, "R and E" has a fully integrated hospital-university clinical program which accepts no private patients.

gynecology and a modest facility for psychiatry. All out-patient activities of the College of Medicine were incorporated in this structure.

The orthopedic unit, containing beds for both children and adults, was erected by the state welfare department as the Illinois Surgical Institute in 1930.

The Illinois Neuropsychiatric Institute was completed in 1940 with in-patient accommodations, clinics, staff offices and research laboratories for the departments of psychiatry and neurology and neurological surgery.

Under terms of agreement with the welfare department, the General Hospital and the Illinois Surgical Institute were conveyed to the University in 1943, and in 1951 the Illinois Neuropsychiatric Institute was incorporated into the Research and Educational Hospitals,

Recent Expansion The most recent expansion was completed in 1953 with the erection of a conjoining 14-story structure which is connected by underground tunnel with the other hospital and college buildings in this square block area.

As the "center of gravity" for the entire hospital operation, it contains the administrative offices and the ancillary services for all units—medical records, radiology, dietary, operating rooms, central supply and the emergency service. In addition, there are in-patient facilities, departmental offices and laboratories for the departments of medicine, surgery and pediatrics.

A continuing program of remodeling of the parts of the Hospital from which clinical services have been relocated is in progress. The extent and complexity of the job, and the need to keep essential services in operation, project the remodeling program well into the future.

The Illinois Eye and Ear Infirmary, located about halfway between the Medical Center and the "Loop," is operated as a joint function of the Department of Public Welfare and the University. It is staffed by the departments of oph-

thalmology and otolaryngology with consultants from the division of anesthesiology and departments of pathology, radiology, medicine and pediatrics.

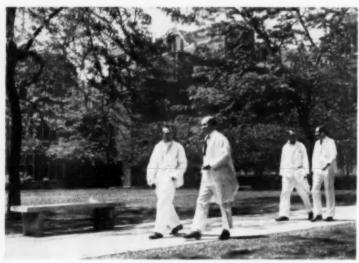
Professional Colleges The Research and Educational Hospitals are an integral part of the Chicago Professional Colleges of the University of Illinois, the main campus of which is located at Urbana-Champaign, about 140 miles to the south, The Professional Colleges include the College of Medicine, currently admitting first year classes of 190 students; Dentistry, admitting a freshman class of 90; Pharmacy, with 200 new students, and the School of Nursing, a collegiate program which graduated its first class in June 1957.

In addition to hospital administrative duties, the medical director of "R and E" is associate dean of the College of Medicine. This unique dual appointment was developed to provide maximal



Usenarge summaries are transcribed by stenographers in the Hospitals' medical records library-transcription pool. About 50 summaries a day are transcribed here.

House staff members of the R&E Hospitals walking across the hospital quadrangle.





The University of Illinois Research and Educational Hospitals. In the center is the 14-story addition. The original building is hidden by the new structure. At left in photo is the neuropsychiatric building of the Hospitals which houses the College of Medicine's Departments of Psychiatry, and Neurology and Neurological Surgery. At far right is the Dentistry-Medicine-Pharmacy building of the University's Chicago Professional Colleges, providing classrooms, laboratories and administrative offices,



House staff members in the College of Medicine's Quine Library of Medical Sciences, one of the largest medical libraries in the United States. The library has 125,000 volumes and receives regularly 900 medical journals.

Here a member of the Research and Educational Hospitals house staff dictates a summary of a hospital admission upon discharge of the patient, using the telephone recording system on one of the wards.



coordination between the College and the Hospitals in their primary educational function.

Working Relationship Although the Hospitals represent the focal point for the clinical teaching program for undergraduate medical students, other institutions in the District are used to a substantial extent. These include Presbyterian-St. Luke's, Cook County and the West Side V.A. Hospitals.

A formal contractual relationship

exists with Presbyterian-St. Luke's Hospital and a close working relationship with the two hospitals is enhanced by a substantial overlap at the faculty-attending staff level. The proximity of the four institutions has a material bearing on the integration of teaching activities and the referral of interesting teaching and research cases,

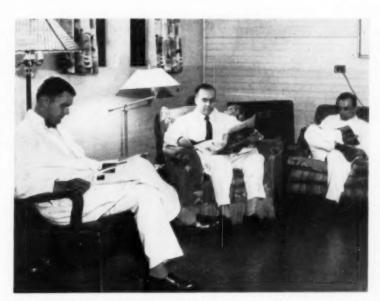
Outpatient Clinics The out-patient clinics of the Research and Educational Hospitals, embracing all of the recog-



Ward rounds give house staff members a chance to discuss each patient's case thoroughly with attending staff members.



A house staff member changes a patient's gastrostomy tube in the hospitals' surgery clinic, while other staff members watch. An average of 1,383 patients visit the surgery clinic each month.



R&E Hospitals' house staff spend moments of relaxation in the house staff lounge. The lounge offers a social and recreational center where friends and families find facilities for entertainment, as well as a play area for the children of house staff members when they visit the hospital.



Physicians on duty in the R&E Huspitals' emergency service see a variety of traumatic injury cases daily. The emergency service offers an interesting and diversified experience for the house staff and is a hospital admission source of patients needing urgent attention.

nized specialties and many of the subspecialties, are operating at a volume exceeding 200,000 visits per year. Distribution of clinical material seen here in the course of a year covers virtually the entire spectrum of medical problems.

The emergency service, activated in 1954, offers experience in handling acute and emergency cases. Approximately 1.100 cases each month are treated in the emergency service; the service includes all facilities for high quality emergency care, and maintains four beds for patients requiring overnight observation, X-ray and laboratory equipment are included in the suite. Working under a general mandate to make its facilities available for the care of the medically indigent, the fact that a patient has sufficient resources to pay does not bar his admission if the nature of his medical condition has teaching or research interest.

Admission Policy The Hospitals are operated almost entirely on an appropriation from the State of Illinois through the University. Patients with resources, including prepayment insurance plans, are accepted as service patients under the care of house staff members who, in turn, are responsible to attending physicians.

There are no private patients in the Research and Educational Hospitals,

Admissions are usually made at the discretion of the member of the resident staff assigned in rotation to the admitting function for each of the 30 clinical services.

The sources of admission to the wards are basically three. First, the outpatients clinics represent the major area for admissions, followed by referrals from physicians and social agencies in the county and state. Thirdly, an increasing number of patients have been admitted through the emergency service since its activation in 1954.

Efforts have been intensified in the past two years to enhance the relationships with referring physicians throughout the state by improving communications relating to their patients. Telephone dictation equipment is installed on each ward. Letters or case abstracts dictated from the house staff office on

the wards are recorded in the central transcription pool. Prompt, concise reports on the workup, diagnosis and treatment are regarded as an essential part of the process of resident training, particularly, as it relates to the art of inter-physician relations.

Library, Research The Research and Educational Hospitals, organized as they are in the family of the University's Professional Colleges, enjoy rather unique collateral academic advantages. The Quine Library of Medical Sciences, one of the largest libraries of its kind in the nation, contains 120,000 volumes and subscribes to more than 1,100 journals. It is a part of the University of Illinois Library which in itself ranks third in the country among university libraries in the number of volumes and the scope of reference material.

Research conducted by the College of Medicine through its faculty represents an annual dollar investment from outside grants in excess of 1 million dollars in addition to University funds. Much of this work is carried on in the clinical fields and by the staff of the clinical departments in the hospital areas.

Attending Staff The attending staff structure is built around the concept of full time department heads with varying numbers of full time staff members. However, all departments are substantially strengthened by a number of attending physicians whose time varies from 90 percent to 10 percent. This balance in interest and skills is deemed important in providing the broadest possible intellectual stimulus to the residents, the interns and the clinical clerks.

The full-time staff members coordinate administration with their respective teaching and research interests and the part-time staff members contribute their private practice experience with emphasis on the total care of the patient.

Autopsy Rate For many years the post-mortem examinations have been a point of emphasis with attending staff and house staff alike. Over the past ten years the autopsy percentage has been



House staff committee of the University of Illinois Research and Educational Hospitals meets periodically to discuss training programs and to screen house staff applications.



The executive committee of the house staff meets with the medical director, Dr. Donald J. Caseley, at least once a month to "solve, small problems before they develop into big ones."

no lower than 88 percent and, on more than one occasion, has been as high as 90 percent. This uniformly high rate of post mortem follow-up has been attributed to many factors but in the last analysis it reflects the deep interest and dedicated purpose of the house staff.

Each Tuesday noon a clinicopathological conference is held and is attended by both the hospital staff and the third and fourth year students. Medical grand rounds are held from 11:30 a.m. to 1 p.m. Thursdays. Surgical grand rounds are held at 2 p.m. on Saturdays and the surgical-pathology conference on Thursdays from 1 p.m. to 2 p.m.

Other departmental rounds and a number of interdepartmental clinical conferences are scheduled through the week in such a manner that the visitor to the Hospitals invariably finds some educational activity scheduled.

Regular house staff meetings, presided over by the medical director, are held from 4:30 to 5:30 on the first Thursday afternoon of each month. They are designed to fulfill a two-way communication function with respect to the administrative problems of the hospital and the house staff program.

Exhibits In 1956, three color television programs originated from the Research and Educational Hospitals and the Illinois Eye and Ear Infirmary. These productions covered a total period of 11 days and were transmitted by closed circuit to downtown hotels housing the annual conventions of the American Academy of Ophthalmology and Otolaryngology, the American College of Surgeons and the American Medical Association. With one or more medical organizations meeting in Chicago each week members of the staff and, frequently, entire departments develop exhibits and participate in clinical demonstrations on an ever increasing basis.



Prepared especially for Medical Times by C. Norman Stabler market analyst of the New York Herald Tribune

INVESTING

for the Successful Physician

HIGHWAYS AND HIGHWAYMEN

Something tells us we should take a second look at this Federal highway program. To oppose it is one of the best ways we know of losing friends. But never having been a candidate for the popularity parade, we'll throw in a few unpleasant thoughts, even at the risk that our best friends will tell us we have B.O., meaning in this instance that we are a bestial outcast, throwing a monkeywrench in the wheels of progress.

Advocates of more spending and two cars parked illegally at the curb tell us the big momentum to the economy will come from the Federal Highway Building Program. It's going to be better than a major war in speeding up demand for heavy construction items and employing the unemployed and making it possible for Aunt Susie to buy a new gingham dress every Saturday night.

It will do that; but let's take a look

at the cost. Not just the cost in dollars, because in this so-called compensated economy dollars have become relatively unimportant. They are just counters, a famous English economist told us, and we believe him. So you spend it up and live it up, and that's just fine, because if the economy goes into a slump you merely tap Uncle for a little more of the dollars he doesn't have and spend your way out of a depression.

It sounds fine, as does the thought of a shot in the arm to the drug addict. Somehow we can't quite swallow all of this modern talk about spending more than you have in order to get rich. Must be we are getting old, as was our grandfather, a country doctor in Chester County, Pennsylvania, when he complained in the nineteen twenties that our corporations were borrowing money they would never repay. How right he was, but he said it too long before the collapse of 1929.

So now we are going to live it up with federal money to build highways. On the surface it looks like no one is going to pay anything, because it will all come out of Uncle Sam, and he has loads.

Remember when they first started talking about a Federal highway program? It was to be self-liquidating. Tolls would soon retire the debt. It wouldn't cost anybody anything. There would be jobs for thousands and new orders for plants that supply the needed materials.

What happened to that plan? Because the idea now is that it will be free, to motorists. It won't make any difference to the family that isn't able to own a car. But this family will contribute its share of the cost. It won't do any good for the railroads, which are big tax payers and are fighting a battle against the high cost of inflation, which just about has them down.

Highway advocates even plan speedways paralleling existing railroad facilities. One of their arguments is that we need this duplication for national defense, although it is obvious that a train, using a three-man crew, can transport men and materials and beat truck haulage by a wide ratio.

We want super highways, but if the federal government is going to build them on a boon-doggling and leaf-raking basis, we had better remember that those of us who use a super highway, maybe twice a year, will be paying about fifty dollars a trip for our "free" ride. We'll pay the \$50 on our income tax, even if we never see a new highway.

BIRTH RATE PAINS

While we're shooting at popular misconceptions, let's take a look at conceptions in the matter of our growing population. Figures are staggering. Just as soon as the advocate of the pogo stick industry runs out of other arguments, he trots out statistics on the number of new babies doctors are delivering daily, weekly, yearly, or any period of time that suits his purpose.

The point he wishes to make is that if the population keeps growing it stands to reason there'll always be an increasing demand for pacifiers, kiddie cars, orchids and flights to Reno. It's just as simple as that. All we need is more babies.

Standard & Poor's had a statement recently that between now and 1965 American industry will have opened to it "a vast new market, matching the combined population of the states of New York and Pennsylvania."

It based this on the Bureau of Census estimate that while we had a population of 132 million in 1940 and jumped it to 165 million in 1955, all we have to do is to continue that rate of increase and by 1965 we'll have 190 million, and by 1975, 218 million. This promises well for the cigarette industry, publishers of comic magazines and sign painters who make up S.R.O. cards.

Is a big population the secret of prosperity? Obviously not. Standard & Poor's takes this familiar argument apart merely by citing that India and China are teaming with millions of individuals, and they are poverty-stricken. Vance. Sanders & Co., distributors of

Massachusetts Investors Trust shares and other mutual funds, comments that in the last ten years here is what has happened to our population:

- 16 million people have died.
- 18½ million marriages have taken place.
- Some 41 million babies have been born.
- Over one-fifth of all present families in the U.S. have been formed.
- Out of the 170-odd million people in the U.S. today, 71% do not remember World War I.
- 49% do not remember what conditions were like before World War II.
- 57% have no personal recollection of what a major depression is like.
- 42% cannot remember Russia as an active ally of the U.S.

It adds that, "Behind all these statistics and trends of population is a maze of factors which have an important bearing on the status of individual companies and of entire industries. Most investors are aware, at least to some degree, of day-to-day financial developments, but generally speaking, are not too familiar with the developments relating to population changes such as we have been discussing.

"Yet it is such changes as these—and there are innumerable others like them—that make the business of investing such a complex one. Nobody has all the answers, to be sure, but a little reflection on the problems posed by these considerations can produce some good arguments in favor of broad diversification and intelligent, continuous supervision."

It doesn't say anything about intelligent supervision of having babies, but we'll leave that to the doctors.

WHAT ARE EQUITY ANNUITIES?

Equity annuities, sometimes called variable annuities, constitute a subject of debate that is cropping up more and more in the financial press. The battle lines are drawn, with insurance companies on opposite sides, as are individuals.

One financial publication recently referred to the battle as the most controversial financial subject since Roosevelt unveiled the securities acts. Another says it is one of the bitterest disputes to erupt in the staid life insurance business in years.

The Prudential Life Insurance Company is crusading on behalf of equity annuities and its big rival, the Metropolitan Life Insurance Company, is just as fervently opposed.

An equity annuity, say its proponents, is simply a conventional annuity coupled with equity investments. They see it as the best tool yet devised to protect retirement income against inflation. They say it is best explained by comparing it with more conventional annuities which have been sold for many years — where the insured pays the in-

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increases peripheral circulation and reduces vasospasm by (1) adrenergic blockade, and (2) direct vasodilation. Provides relief from aching, numbness, tingling, and blanching of the extremities. Exceptionally well tolerated.

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HOFFMANN-LA HOCHE INC MUTLEY, N. J. suing company a given premium, generally so many dollars a year. In return, the company promises to pay him, at an agreed-upon date in the future, a specified number of dollars; either for a fixed number of years, or for life. The question here, say equity annuity advocates, is how much will such a fixed dollar income from a conventional annuity buy when it is received?

Equity annuities, unlike the older policies, are designed to face the fact that the purchasing power of the dollar fluctuates over the years. Therefore, the payout from an equity annuity is measured not in a specified amount of cash, but in "units" which provide a constant level of purchasing power. To keep this payout related as closely as possible to the future rise (or fall) of living costs, the premiums are invested by the life insurance company not in bonds and mortgages, but largely in common stocks.

Its opponents retort that any protective features of the equity annuity are more than offset by the annuitant's exposure to loss of income and principal in times of depression. They also see the equity annuity as an opening wedge, heralding the entry of life insurance companies into the securities business, complete with tax umbrella.

George E. Johnson, a lawyer and insurance executive who is a specialist in pension and retirement income and an expert in the field of equity annuities, describes an equity annuity this way:

"They are a new type of annuity expressed in units, the value of which varies from time to time directly in response to changes in the capital values and earnings on the investments supporting them. The equity annuity directly applies the annuity principle to a

new area of investment, common stocks, giving the individual the assurance that he can maximise his retirement income by using up both capital and dividend payments without danger of outliving his income. The dollar amount of an individual's income from an equity annuity will be larger when earnings and prices of equity investments are higher, and vice versa.

"We want the opportunity to offer, in open competition, a commodity whose merit and very existence are products of our changing times. Equity annuities are merely following a natural, evolutionary trend."

Mr. Johnson pioneered in equity annuities when he was vice president and general counsel of the Teachers' Insurance and Annuity Association (TIAA) headquartered in New York. He was seeking a way of protecting the retirement income of teachers from the ravages of inflation. After long study he proposed a combination of life insurance and annuities with 50 per cent of the annuity premiums to be invested in common stocks and other equities instead of bonds and mortgages with fixed dollar yields. TIAA found the proposal sound and in 1952 set up a College Retirement Equity Fund. This fund enabled its members (educators and staff members of colleges and preparatory schools) to earmark part of their annuity premiums — up to a maximum of 50 per cent - for investment in common shares with a variable payout that would tend to move with the cost of living. Today, five years later, CREF has some 32,000 members with a combined stake of more than \$41,000,000 invested in

for prolonged vasodilation in chronic circulatory disorders



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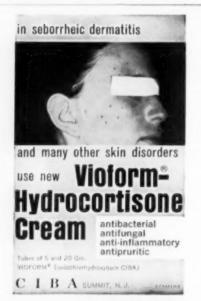
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See page following 180a for actual clinical demonstration

stocks to produce income from which comes much of the income paid to its members as annuities.

Large industrial companies have adopted the idea for improved pension and retirement systems for their executives and their employees. Among these are Long Island Lighting Corporation; Chemstrand Corporation; Kidder, Peabody & Company; Smith, Barney & Company; the Carnegie Institution of Washington; Boeing Airplane Company; Pan American Airways; Warner-Lambert Company. States and cities looking to improve their retirement plan for municipal and state employees have also adopted the equity annuity principle.

Mr. Johnson and many others are convinced that "the general public needs and deserves the privilege of buying an annuity contract that tends to move with the cost of living." He considers his personal experience with an equity annuity policy as graphic proof of their value. From July 1, 1952, to July 1, 1957, he paid \$5,055 in premiums for a fixed-annuity policy which he owns and the accumulated value is now \$5,345. During the same period he put \$5,045 in a CREF equity annuity policy which now has an accumulated value of \$9,270.

On March 30 the SEC petitioned the United States District Court in the District of Columbia for a permanent injunction which would bring life insurance companies offering equity annuity plans under their jurisdiction and regulation. The National Association of Security Dealers joined SEC as a formal party to its petition to the Court.

Technically, SEC asked for an injunction to compel Variable Annuity Life Insurance Company to subject itself to rules which would be prescribed by SEC.

OPPOSES CRASH-PROGRAM

The Guaranty Trust Company, New York, through its monthly business and economic review, "The Guaranty Survey," voices strong opposition to large-scale construction by the government of atomic-energy facilities for commercial output at taxpayers' expense. It opposes governmental crash-program plunging of hundreds of millions "and ultimately billions" of dollars into such projects which, it feels, would be undertaken merely for purposes of international prestige or out of what it calls "an almost superstitious fear of private monopoly."

The present need is, rather, for research of the type that numerous publicutility and manufacturing companies are initiating under the government-industry "partnership" instituted by the Atomic Energy Act of 1954, the survey declares.

"The activity could not be in better hands, for such companies have the soundest of reasons for wishing to discover cheaper and more abundant sources of power," according to the Guaranty publication, "and in their search they are guided by purely economic considerations.

"If and when such investigations reveal methods by which atomic power can be made truly competitive with power from other sources on a cost basis, then, and only then, will the expenditure of billions of dollars for largescale atomic installations be warranted."

When that time comes, the Survey predicts, "the expenditure will be eagerly made by private industry without any need for tax-supported 'programs'."

More rapid construction of commercial reactors in certain other countries,



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See page following 180a for actual clinical demonstration

such as Great Britain and Russia, is taking place because fossil fuels (coal, oil and gas) are further removed and more expensive there than here, it is explained. As natural reserves diminish and these other fuels become more expensive in this country, and as technological progress makes atomic energy cheaper, America also will find it necessary to use nuclear energy commercially. The bank advocates further liberalization of the terms of Government-industry "partnership" and further steps toward a regime of free enterprise in atomic-power development.

"The path of progress," it says, "certainly does not lie in the squandering of resources and energies in large-scale generation of presently uneconomic power or in the establishment of a pattern of government-in-business that could eventually fasten a socialist dictatorship upon the country's economic life."

THE STAKE IN RETAIL TRADE

Shares of retail trade concerns have not been one of the most popular groups of stocks with the portfolio managers of the investment companies. A recent study by the N.A.I.C. shows that its 162 members have \$154,207,000 invested in the common stocks of 57 retail companies. Two years ago the sum was \$170,491,000, also in 57 concerns.

Sears, Roebuck & Co. was the most popular, followed by Federated Department Stores.

Two years ago Sears also led the list, with Allied Stores second, and then Federated, Ward and J. C. Penney.

The association's latest tabulation appears on the following page.



will her arms be filled this time?

One or two of your next 10 pregnant patients may abort. To help these aborters maintain their pregnancy, Nugestoral® supplies five agents known to contribute to fetal salvage. Three Nugestoral tablets per day throughout gestation will help bring your abortion-prone patients to term.

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Of renewed importance in the prevention of abortion, 1-4 luteal hormone prepares the uterus for implantation and maintenance of the conceptus. Its specific uterine relaxant action reduces the excessive uterine irritability so often found in habitual aborters. Ethisterone is the orally effective form of luteal hormone,

Hesperidin and Vitamin C

Capillary permeability and fragility may be involved in habitual abortion. 5-9 Since bioflavonoids, particularly hesperidin, acting conjointly with vitamin C, foster capillary integrity, these agents have been employed in habitual aborters to protect decidual vessels, with high fetal salvage as a result. 6-8

Witnessin M.

The value of vitamin K during pregnancy to prevent bleeding tendencies in both mother and infant is long-established. In addition, it appears that vitamin K may be of value in habitual aborters, 6,10,11 to prevent frequently encountered hemorrhagic diathesis,7 particularly if membranes rupture prematurely or cervix obliterates and dilates early.12

Vitamin E

Alpha-tocopherol is considered by many obstetricians to be part of the standard therapeutic regimen for poor-risk obstetrical patients, as an extra precaution which has often proven of value. Alpha-tocopherol acetate, particularly, has been credited with improving fetal salvage in many nutritionally inadequate women. 13,14

To Help Preserve Pregnancy In the Abortion-Prone Patient

ESTORA

ORGANON INC. Orange, New Jersey



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Investment Company

Holdings of Retail Trade Common Stocks

JULY, 1955 135 Investment Companies

JULY, 1957 162 Investment Companies

DEPARTMENT AND SPECIALTY STORES-(TOP FIVE)

Inv. Cos. Holding	Market Value		inv. Cos. Holding	Morket Voice	
35 36 12 16 14	14,378 11,525 5,879	Allied Stores Federated Dept. Stores J. C. Penney May Dept. Stores Marshell Field & Ce.	33 27 13 16	9,803 8,738 6,392	Federated Dept. Stores Allied Stores J. C. Penney May Dept. Stores Marshall Field & Co.
	\$75,148	Total Investment in 25 Cos.		\$48,018	Total Investment in 24 Cos.

FOOD CHAIN STORES-(TOP FIVE)

13		Safeway Stores First National Stores	18		Safeway Stores Kroger Co.
7	4,053	Grand Union Co.	12	5,866	Grand Union Co.
33		American Stores Co. Kroger Co.	4		Dominion Stores Ltd. First National Stores
	3,963	Kroger Ca.	60000	3,573	PROF PERSONAL STORES
	\$30.397	Total Investment in 15 Cor.		\$40.013	Total Investment in 17 Cos

MAIL ORDER COMPANIES

36 18 3	13,606 85	Sears Roebuck & Co. Montgomery Ward Alden's Inc. Spiegel, Inc.	25 19 2 2	13,421 258	Seen Reebuck & Co. Montgemory Ward Spiegel, Inc. Alden's, Inc.
		Total Investment in 4 Cos.		\$34.708	Total Investment in 4 Cos.

VARIETY STORES_(TOP FIVE)

8 8 9 2 7	4,420 3,022 2,196	F. W. Woolworth W. T. Greet H. L. Green S. S. Kresge G. G. Murphy		7 4 2 4 9	2,483 2,210 1,453	H. L. Groon W. T. Grant S. S. Kreege G. C. Murphy F. W. Weelworth
	\$20.922	Total Investment in I	3 Cos		\$11.388	Total lovestment in 12 Cos.

Dollar Values are in thousands of dollars.

Source: National Association of Investment Companies.

(Vel. 86, No. 18) October 1987

DISCOUNTS AND PREMIUMS

Mutual fund shares are redeemable at fixed asset value (sometimes minus a small charge) at the behest of the holder. Shares of closed-end investment companies can be sold whenever the investor wishes to do so, but he must sell on the market and the price he gets depends upon the demand for these shares, the same as if he held Telephone, Steel, Jersey or any corporate stock.

There are time when shares of a closed end company sell at a premium above the net asset liquidating value of the shares in which the investment company is invested. More often they sell at a discount.

Why should this be? Edward B. Burr, executive director of the N.A.I.C. has undertaken to throw some light on this question, which probably will never be answered to the complete satisfaction of everyone. His association made a survey of 24 closed-end companies as of June 30. At that time 20 were selling at a discount and four at a premium. Market prices ranged over the wide sweep of discounts of 39 per cent to a premium of 108 per cent.

"While no single factor explains all such price discrepancies, it is important for investors to be aware of them and to understand the possible reasons for the market price of any such stock in which they have an interest," Mr. Burr stated.

He listed seven influences on supply and demand factors which, in turn, may tend to create discounts and premiums in the market prices of closed-end investment company stocks.

The public's familiarity with an investment company's name or with its management record may be reflected in the market price of its stock. Shares of some investment companies have long histories of premiums believed to have been brought about by sustained public interest stemming, at least in part, from effective public relations.

• Leverage—the degree of borrowed money, bonds or preferred stocks in an investment company's capital structure—affects the speed at which the price of its stock moves. Leverage makes the asset value of a stock move faster and higher in a rising market and, conversely, faster and lower in a declining market than the general rate of the market as a whole.

A company's policy of distributing its earnings may make the stock of one closed-end investment company more desirable to certain investors than the stocks of others, A policy of paying out large capital gains is an example.

The extent of an investment company's outstanding potential liabilities, may tend to discount the price of its stock.

 Economic and political events may influence investor appraisal of an investment company's field of investment—its degree of commitment to certain industries.

For some closed-end investment companies there is an historical disparity between market prices and asset values per share. Discounts and premiums, like physical traits, tend to endure. They become part of a company's identity and are accepted as such in the marketplace.

 At times, relatively thin trading markets have tended to create both premiums and discounts.

"Some investors," Mr. Burr con-



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Vitamin D		S. P. Units
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Thiamine Monanitrate (B)	1	10 mg
Riboflavin (B:)		10 mg.
Pyridoxine HCl (B.)		2 mg
Vitamip E (as tocophery)	acetalesi	5 L.U.
Vitamin K. (Menadione)	med mid if	2 mg
Ascorbic Acid (C)		150 mg.
Calcium Pantothenate		5 mg
Niacinamide		100 mg.
Folic Acid		t mg.
Calcium (as CaHPO _c)		107 mg
Phosphorus (as CaHPO,)		82 mg
fron (as FeSO ₄)		15 mg.
Magnesium (as MgO)		6 mg.
Potassium (as K.SO.)		5 mg
Iodine (as KI)		0.15 mg
Boron (as Na.B.O. 10H.O)		0.1 mg.
Copper (as CuO)		I mg.
Manganese (as MnO.)		I mg.
Fluorine (as CaF.)		0.1 mg.
Zinc (as ZnO)		1.5 mg
Molybdenum (as Na MoO	-2H Oi	0.2 mg.
Choline Bitartrate		25 mg.
Inositol		25 mg.
1-Lysing Monohydrochloric	le:	25 mu.
Rutin		25 mg
Purified Intrinsic Factor C	oncentrate	0.5 mg

DOSAGE: I capsule daily for the treatment of vitamin and mineral deficiencies, or more as indicated.

SUPPLIED: Bottles of 100 capsules.

LEGERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK



tinued, "consider that a premium price for closed-end investment company stocks reflects superior management that is worth the added price. Others favor stocks selling at discounts since these, in fact, permit the investor to acquire the yield from more dollars of invested assets than investor actually pays for. "It is the interplay of all these factors that creates discounts and premiums in the prices of closed-end investment company shares. The investor should know what discounts and premiums mean. As to what brings them about in a particular situation, not even Univac could give a complete answer."

HOW'S YOUR ENERGY?

In contrast to mutual funds which seek balance between this, that and the other thing, there are many that concentrate on one field. They specialize. Advocates of the balanced fund idea say special funds have no excuse for being, because a cornerstone of the mutual fund business is diversification.

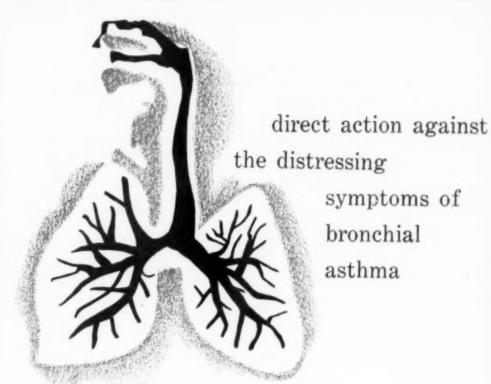
Special funds diversify, but within their chosen field. They argue that if they see a bright future for the pogo stick industry, why not invest in shares of many makers of pogo sticks instead of cluttering up the portfolio with lowyield government bonds or other securities?

This reference to pogo sticks is purposely fantastic, because the world of science, for instance, offers so many broad avenues that one need but pick

Guide For Investors

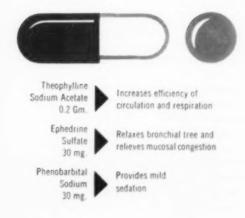
Based on recommendations of the Securities and Exchange Commission in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

- 1. Think before buying, guard against all high pressure sales.
- 2. Beware of promises of quick spectacular price rises.
- 3. Be sure you understand the risk of loss as well as prospect of gain.
- 4. Get the facts—do not buy on tips or rumors.
- Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
- 6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
- 7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects.



Luasmin

Capsules and Enteric Coated Tablets



An established formula, Luasmin supplies three ingredients which provide the practical symptomatic approach in the treatment of bronchial asthma.

Taken before bedtime, a capsule and a tablet usually assure a full night's sleep. During the day, Luasmin capsules bring prompt relief.

> Brewers Est. 1852

Samples and literature on request

Brewer & Company, Inc. Worcester 8, Massachusetts, U.S.A. and choose. To name a few, chemistry, wonder drugs, electronics, automation, atomic power, and a number of others.

Which brings us to a consideration of Energy Fund. It is a mutual fund designed to diversify in the energy field. That's a pretty wide field. One assumes it has many possibilities from which to choose the stocks that will go into its portfolio.

This fund has been doing well, as witness the fact that it first offered its shares on October 19, 1955, when the asset value was \$119 a share. It jumped to \$153.92 on June 30, 1956, and \$176.07 on June 30, 1957. Moreover, this net asset value per share does not include the September, 1956 capital gain distribution of \$4.72 a share.

The fund specializes in investments in industries and companies whose activities are related to the field of energy and its sources. It is a fund of the noload type. By that it is meant there is no initial charge, over asset value, to get in. Most mutual funds make a charge of around 7 to 8 per cent at the time of purchase, this amount being split between the salesman, the wholesaler and the sponsor.

Energy Fund is managed by the Stock Exchange firm of Ralph E. Samuel & Co. While the fund has no loading charge, this firm receives a quarterly fee of an eighth of one per cent of average net asset value, or a half-per cent a year, for its services, which is a normal charge, typical of most funds.

In its latest statement Energy Fund reported it had bought 3,000 shares of Fansteel Metallurgical, 1,500 Foster Wheeler, 1,700 Safety Industries, 3,000 Tampa Electric, and 9,000 Ultramar, Ltd., and had increased its holdings of Joy Manufacturing, Lindsley Chemical, Royal Dutch Petroleum, Texas Instruments and Ventures, Ltd.

It eliminated its holdings of Borax Ltd., Consolidated Denison Mines, Home Oil and Northspan Uranium.

INVESTMENT FUNDS ENTER COLLEGE

The Bernard M. Baruch School of Business and Public Administration, of the College of the City of New York, is offering a fully accredited course this year devoted exclusively to investment companies.

Key representatives of the business world will be guest lecturers during the course which meets Thursday evenings from September 19 through January 16. Dr. Harold S. Oberg, Research Director of the National Association of Investment Companies and a member of the College faculty, will supervise the course.

When the same course was offered

previously it attracted one of the largest enrollments in the history of the Baruch school, and marked the first time a course devoted entirely to investment companies had been given for full credit at any college or university.

Subjects covered during the spring semester will include characteristics of open-end and closed-end investment companies, management procedures, investment company policies, management appraisal, methods of distribution, taxation, regulation of the industry by federal and state laws, types of investment company shareholders and estate planning.

Investment Services

Upon request you may have a booklet that gives a comprehensive digest of financial information relative to all leading stocks listed on the New York Stock Exchange, American Stock Exchange and many that are traded in the over-the-counter market issues. Just write a card or note for your free copy to Cosgrove, Whitehead & Gammack, members of the New York Stock Exchange and American Stock Exchange and Registered Investment Advertisers, 44 Wall Street, New York 5, New York.

T. ROWE PRICE GROWTH STOCK FUND, INC. Dept. P, 10 Light St., Baltimore 2, Md.

OBJECTIVE: Possible long term growth of principal and income.

OFFERING PRICE: Net asset value per share. There is no sales load or commission.

Write for Prospectus

COMPANIES AND INDUSTRIES

Among recent brochures, studies and comments received from financial concerns are the following:

SUBJECT	FIRM
Woolworth & Co.	Thomson & McKinnon
Pepsi-Cola	Green, Ellis & Anderson
Time to buy bonds?	Sartorius & Co.
Appraisal of govern-	
ment agency obligations	N. Y. Hanseatic Corp.
The promise of boron	Bache & Co.
Marmon-Herrington Co.	H. Hentz & Co.
American Airlines	John H. Lewis & Co.
American Marietta Co.	Fahnestock & Co.
Brown Shoe Co.	W. E. Burnet & Co.
Companies strong in research	F. I. duPont & Co.
Unilever	Arthur Wisenberger & Co.
Poor & Co.	Paine, Webber, Jackson & Curt
Newport News Shipbuilding	Reynolds & Co.
Eastern Industries, Inc.	F. S. Moseley & Co.
American Can Co.	Halle & Steiglitz
I-T-E Circuit Breaker	Shearson, Hammill & Co.
Chicago Pneumatic Tool	Harris, Upham & Co.
Bargains in Rail Bonds	Vilas & Hickey
General Cable Corp.	J. R. Williston & Co.
Bell & Howell	Hayden, Stone & Co.
Hood Chemical Co.	Gude, Winmill & Co.
Worthington Corp.	Amott, Baker & Co.
Columbia Gas System	Eastman Dillon, Union Securities
(Vol. 85, No. 10) October 1957	

FIRM	NEW	YORK ADDRESS
Thomson & McKinnon		11 Wall St.
Green, Ellis & Anderson		61 Broadway
Sartorius & Co.		39 Broadway
N. Y. Hanseatic Corp.		120 Broadway
Bache & Co.		36 Wall St.
H. Hentz & Co.		72 Wall St.
John H. Lewis & Co.		63 Wall St.
Fahnestock & Co.		65 Broadway
W. E. Burnet & Co.		II Wall St.
F. I. duPont & Co.		I Wall St.
Arthur Wisenberger & Co.		61 Broadway
Paine, Webber, Jackson & Curtis		25 Broad St.
Reynolds & Co.		120 Broadway
F. S. Moseley & Co.		14 Wall St.
Halle & Steiglitz		52 Wall St.
Shearson, Hammill & Co.		14 Wall St.
Harris, Upham & Co.		120 Broadway
Vilas & Hickey		26 Broadway
J. R. Wiliston & Co.		115 Broadway
Hayden, Stone & Co.		25 Broad St.
Gude, Winmill & Co.		I Wall St.
Amott, Baker & Co.		150 Broadway
Eastman Dillon, Union Securities & C	0.	15 Broad St.

THAT OLE FEELING

Around about the time of Adam, man started thinking about what would happen when he got old. As time went on those who were adept at coining phrases, and a poet here and there, began making pithy observations on the subject.

Hence we have such familiar statements as, "A man is as old as he feels," a "man is old when he stops looking," a "man is not old if he can jump over a stick," and countless others that play the same tune with different words. These contain frequent references to silver threads among the gold, grow lovely while growing older, old books are best, old wine is better, when you were young Maggie, Auld Lang Syne, old lovers are soundest, things about old men with beards, old men know young men are fools, and a thousand or more similar bits of alleged wisdom with which we old folks have been acquainted since olden times.

Now comes that old mutual fund known as Wellington Fund, which is one of the oldest, as mutual funds go, and it reminds us that the prospect of old age is a very happy one provided you can enjoy your longer life. It adds that the chances are your retirement years will exceed in number those in a table it obtained from the Public Health Service, National Office of Vital Statistics.

This table contains such information as the fact that 14,100,000 Americans (8.6 per cent of the total) are over 65 years of age. That's one in twelve.

Furthermore, it adds, the "average" man who reaches 65 years can expect to last another 12½ years; . . . the "average" woman is good for another fifteen. Tough people, these women.

Ten years ago the average life expectancy at age 65 was four to five years less. Ten years hence, it may be four or five years longer.

"This means that the younger you are, the more likely you are to live longer," declare these Wellington statisticians, with a finality that is disturbing to the writer, but may be cheering to his readers. Too bad this information wasn't available to our parents; but there weren't any mutual funds in those days.

There's a catch to all of this. Wouldn't you know it? It seems that if we are to enjoy those later years, which the medical profession has been of assistance in granting us, its high time we gave thought to—for want of a better term—we'll call simply the exigencies of our economic welfare. Interpreted, that means its all right to grow old if you still have the wherewithal to keep in good standing with the butcher, the baker and that chap down in Washington who doesn't make candles.

Wellington's well-wishers warn us that two-thirds of the men and women over 65 years of age have incomes of less than \$1,000 a year, and another 15 per cent have less than \$2,000. There was a day when that was not too bad an income, but since then we have had the benefits of a compensated economy. It takes more dough to buy that 22-cent loaf of bread, and it has less dough in it than the old nickel variety. So, in these progressive days, one needs more enlightenment on how to buy the hat to top those silver threads that creep in among the gold.

It will require many things to smooth the course of one's retirement years.



appetites with INCREMIN

Finicky eaters are headed for a fast nutritional build-up with INCREMIN-tasty appetite stimulant.

INCREMIN offers I-Lysine for improved protein utilization, and essential vitamins for their stimulating effect on appetite.

Tasty Incremin is available in either Drops or Tablets. Caramel-flavored Tablets may be orally dissolved, chewed or swallowed. Cherry-flavored Drops may be mixed with milk, formula or other liquid. Tablets: bottles of 30. Drops: plastic dropper-type bottle of 15 cc.

Each INCREMIN Tablet or each cc. of INCREMIN Drops contains:

I-Lysine 300 mg. Pyridoxine (B₄) 5 mg. Vitamin B₁₂ 25 mcgm. (INCREMIN Drops contain 1% Thiamine (B₁) 10 mg. alcohol)

Dosage: only 1 Incremin Tablet or 10-20 Incremin Drops daily.

181

LEDERLE LABORATORIES DIVISION AMERICAN CYANAMID COMPANY PEARL RIVER, NEW YORK



	% CHANGE	% CHANGEIN
PERIOD	IN STOCKS	LIVING COSTS
1929-1949 (20 years)	-40%	+ 39%
1906-1914 (8 years)	-16%	+ 12%
1910-1920 (10 years)	-15%	+110%
1946-1949 (3 years)	-11%	+ 22%

There are social security, pensions, savings and investments.

The Wellington Fund, which is one of the largest, has thoughts on the latter. It is a fund that is known as a balanced fund, and it is important to keep this distinction in mind.

By a balanced fund we mean one in which the sponsors seek protection for their investors by dividing available funds so much in bonds, so much in preferred stocks and so much in common stocks. They put a little in government bonds, a little in corporate bonds, a little in a soupcon of common stocks, and each of these major divisions is again divided into any number of parts. Emphasis is on wide diversification.

In this respect such a fund differs from one that aims, let us say, at growth without the benefit of immediate dividends, or possibly immediate dividends without as much regard for eventual growth; or it may be a special fund, concentrating on chemicals, electronics, or what have you. A balanced fund seeks a balance between the contrasting investments that set up a siren call for the investor's dollar.

Included in its consideration is the influence of the changing value of the dollar. Wellington's wisemen say there are two risks in any investment (we thought it was two thousand). The two it selects are that the dollar price of your investment might decline or the value of the dollars in which your investment is measured might decline. Read that a couple of times and you'll see they're talking about inflation, and the 22 cent loaf of bread that used to cost a nickel.

Deflation and inflation are opposite sides of the same coin. In recent years the latter has been coming up with more regularity in the coin of this and other nations.

Managers of balanced funds seek to offset the effects of inflation on purchasing power. Over the long run, they point out, well-chosen common stocks have proved to be more than adequate protection against the long-term uptrend in living costs.

If you want it statistically, they say, "Actually in the 75 year history of common stock indices, stock prices (as measured by Standard and Poor) have risen from a base of 100 to 996, while the Bureau of Labor Statistics cost-of-living index has risen from a base of 100 to 308. To put it another way, the purchasing power of common stocks has risen from 100 to 322 in 75 years. (This figure is the result of dividing the index of common stock prices by the index of

TO LOWER SERUM-CHOLESTEROL

Atheroxin is superior because:

only Atheroxin provides
the cholesterol-lowering
factors of corn-oilproven more effective
than any other
tested vegetable oil.

"The effect of safflower oil on serum-cholesterol in man is less than corn-oil."

"When hydrogenated coconut oil was replaced by an equivalent amount of safflower seed oil the serum-cholesterol promptly fell...ten days later, when the patients were given corn-oil the serum-cholesterol decreased even further."

MOST EFFECTIVE

ATHEROXIN

indications:

atherosclerosis

postmenopausal females
hypercholesterolemia

ATHEROXIN combines the demonstrated and superior cholesterol lowering factors of corn-oil—"in a class by itself, yielding the lowest serum cholesterol values of all the diets"—together with pyridoxine hydrochloride, a singularly effective agent for the utilization and metabolism of essential fatty acids.

ATHEROXIN OFFERS THE PHYSICIAN AN ENTIRELY NEW THERAPEUTIC CONCEPT, UNSURPASSED IN THE TREATMENT OF HYPERCHOLESTEROLEMIA

DOSAGE: Two tablespoonfuls t.i.d.a.c. SUPPLY: Bottles of 24 fl. oz.

sint localerity: 1: Anderson, J. T. Keys, A., Grande, F.: The Lancet #6976 (May 11) 1957; 2: Malmros, H., Wigand, G. The Lancet #6984 (July 6) 1957; 3: Anderson, J. T., Keys, A., Grande, F.: J. Nutrition 62:421 (July 10) 1957.

Full bibliography and further information on request to the Medical Director.



purchasing power.)

Even if we carry the comparison only up to the beginning of the present bull market (1949) we find the common stock index at 325 still slightly higher than the cost of living, at 270. The purchasing power of stocks at that time was, therefore, 120.

On the other hand, the purchasing power of fixed-dollar obligations has steadily declined during this period. Since, by definition, each fixed-dollar in 1871 had a value of one dollar in 1956, we divide the cost of living into that 1956 dollar to get its purchasing power. It is worth just 32c. In other words, each dollar invested in fixed dollar obligations in 1871 will purchase only one-third as much goods and services now as it did then.

Looking back at these statistics, one might ask why one shouldn't invest in common stocks only, and ignore such things as bonds and mortgages. It is true that if one were the seventh son of a seventh son, and thus able to foretell the future, one could have plunked his savings into duPont or International Business Machines and told the world to go take a whirl. None of us is given to such perfect foresight.

We are up against the fact that there is no uniform correlation between living costs and stock prices. There have been numerous periods when the two have moved in opposite directions.

The Wellington people work it out that there is about one chance in three that stocks will not protect purchasing power over a reasonably long period, say fifteen years. By the same token, there are two chances in three it will.

In the chart on page 118a, they give four examples of periods, of varying durations, in which common stocks declined in the face of rising living costs.

ELEVEN BILLION DOLLARS

Not everyone likes investment companies, either the closed-end type or the mutual funds. Arguments frequently heard are that it is better for an investor to select the company or companies he likes and concentrate on them, instead of buying into an investment company that diversifies its risk in many hundred situations. There is also the charge that it can be expensive.

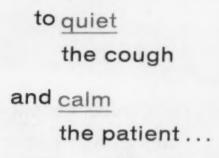
Despite these and other laments the investment company idea keeps growing by leaps and bounds. As of June 30 the 162 closed and open-end companies that are members of the National Association of Investment Companies had assets of \$11,107,559,000. The number of shareholders increased to 3,076,472.

For mutual funds alone the assets reached \$9,687,015,000.

9,000 STENOGRAPHERS

Television Shares Management Corporation, sponsors of the \$148,000,000 Television-Electronics Funds, Inc., tell us of a new device which you may wish to investigate, to take the place of your 9,000 stenographers. They call it a "tire-less stenographer."

-Continued on page 125a



Your modern cough prescription

Expectorant action

Antihistaminic action

Sedative action

Topical anesthetic action

PHENERGAN

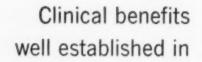
EXPECTORAN Promother of the Promother of

Promethazine Expectorant With Codeine

Plain (without Codeine)



Philadelphia 1, Pa



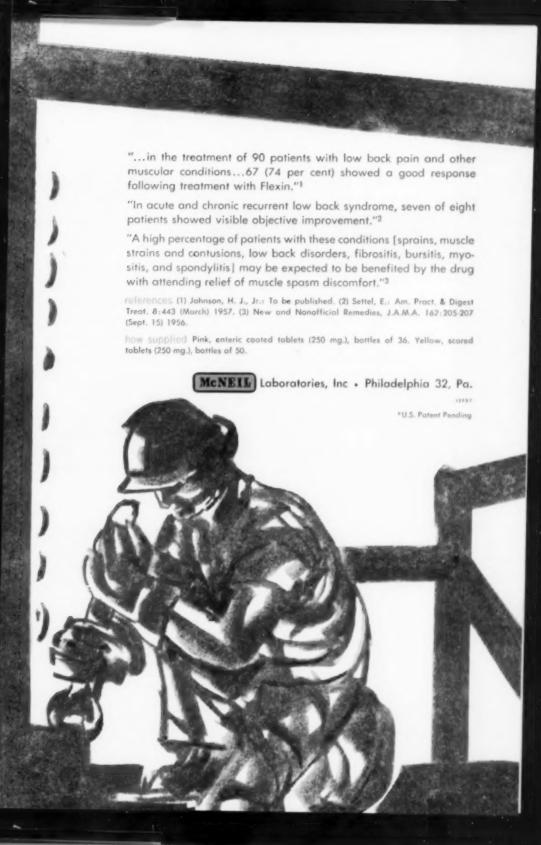
LOW BACK PAIN

and other musculoskeletal disorders

flexin

Zoxazolamine⁴





when a cold takes hold counteract all the symptoms

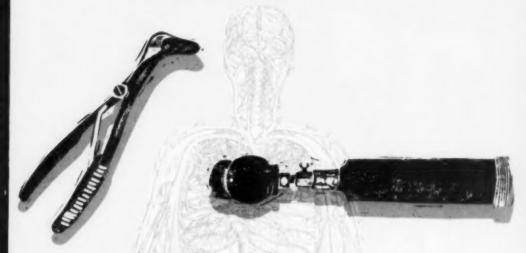
To curb and control even the severest cold symptoms, CORICIDIN® FORTÉ Capsules offer the combined benefits of clinically proved CORICIDIN-plus-

methamphetamine -to counteract depression and fatigue vitamin C -to meet added requirements during stress of illness antihistamine - in full therapeutic dosage

CORICIDIN FORTÉ provides comprehensive therapy not only to counteract congestive and coryzal symptoms of the severest cold but also to combat lassitude, fever, aching muscles, torpor, depression and general malaise.

Schering

CR-J-7107



there are many ways of looking at a cold





from all angles...best for severe colds

CORICIDIN° FORT

Each CORICIDIN FORTE Capsule provides

CHLOR-TRIMETON® Maleate

(chlorprophenpyridamine maleate)

Salicylamide

4 mg. 0.19 Gm.

Phenacetin

0.13 Gm.

Caffeine

0.03 Gm.

Ascorbic acid

0.05 Gm.

1.25 mg.

in bottles of 100 and 1000 capsules.

Methamphetamine hydrochloride

SCHERING CORPORATION . BLOOMFIELD, NEW JERSEY



when you need to give the patient with a cold the benefit of the doubt

CORICIDIN' WITH PENICILLIN

TABLETS

dual control with clinically proved CORICIDIN and oral penicillinarrest the cycle of cold symptoms forestall bacterial infection

> Aspirin
> 0.15 Gm.
>
>
> Phenacetin
> 0.12 Gm.
>
>
> Caffeine
> 0.03 Gm.

Bottles of 24, 100.

1

SCHERING CORPORATION · BLOOMFIELD, NEW JERSEY

It is capable of a multi-million word daily output that is manufactured by the Stromberg-Carlson division of General Dynamics Corp. It is capable of turning out as much work as three daily eight-hour shifts of 3,000 stenographers each.

Called a Charactron computer readout, the new device will be used in conjunction with a Remington Rand LARC computer, and is reputedly 50% faster than any comparable equipment previously manufactured by the company.

The mutual fund management's publication said that the Charactron computer readout will be able to display and record on film split-second "thoughts" of the LARC computer at the rate of 15,000 characters per second. This compares with about 1,200 characters per second achieved by the fastest mechanical printers in general use with computers. At the 15,000 characters per second rate, the publication said, and on a round-the-clock basis, the Stromberg-Carlson device will be able to record 259,200,000 words a day, or the equivalent in figures, diagrams and plotted curves, complete with titles, scales and digital values.

CANADIAN FUNDS GROWING

About 105,000 U.S. investors held shares June 30 in the eight Canadian investment companies whose shares are qualified for sale to investors in this country. This is an increase of 8,000 during the first six months of the year.

Total net assets of the eight Canadian funds on June 30 were \$381,417,357, compared with \$310,265,361 at the end of 1956.

when anxiety and tension "erupts" in the G. I. tract...

IN DUODENAL ULCER



PATHIBAMATE

Meprobamate with PATHILON® Lederla

Combines Meprobamate (400 mg.) the most widely prescribed tranquilizer...helps control the "emotional overlay" of duodenal ulcer—without fear of harbiturate loginess, hangover or habituation...with PATHILON (25 mg.) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: 1 tablet t.i.d. at mealtime. 2 tablets at bedtime. Supplied: Bottles of 100, 1,000.



*Trademan Bragistered Trademan for Tricknessthyl Sadida Lebrita
LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

A PLEASANT SURPRISE M





PRENATAL SUPPLEMENTATION FILLBON

PRENATAL CAPSULES LEDERLE

More agreeable, more effective nutritional support for your pregnant and lactating patients —at no extra cost—new filibon offers these welcome improvements:

NEW less irritating source of iron—ferrous fumarate—avoids gastric upset

NEW non-inhibitory intrinsic factor-provides greater absorption of B₁₂ to meet increased requirements

NEW more comprehensive formulation—includes ample amounts of phosphorus-free calcium, plus Vitamins B₀ and K, and important minerals and trace elements

NEW Reminder Jar – designed for the dining table, so her vitamins can't be forgotten. Re-usable later for diaper pins or cotton.



Each capsule contain	S. P. Units	Iron (as Fumarate) Intrinsic Factor		mg.
			0.015	
Vitamin D 400 U.	S. P. Units	Fluorine (as CaF ₂)		
Thiamine		Copper (as CuO)	0.15	mg.
Mononitrate (B ₁)	3 mg.	Iodine (as K1)	0.01	mg.
Pyridoxine (Ba)	I mg.	Potassium		
Niacinamide	10 mg.	cas KaSOci	0.835	mg.
Riboflavin (B ₂)	2 mg.	Manganese		
Vitamin Brz	2 mcgm.	(as MnO)	0.05	
Ascorbic Acid (C)	50 mg.	Magnesium (as MgO)	0.15	mit
Vitamin K		Molybdenum cas		
(Menadione)	0.5 mg.	Na MoO@2H O)	0.025	
Folic Acid	1 mg.	Zinc (as ZnO)	0.085	
Ferrous Fumarate	90 mg.	Calcium Carbonate	575	mg.

Dasage: one or more capsules daily Supplied: attractive, re-usable bottles of 100 capsules



NATIONAL'S SALES MAKE GAIN

Sales of the National Securities Series of mutual funds for the first eight months of 1957 reached \$55,286,830, exceeding the twelve month record of \$54,566,293 established in 1956, accord-

ing to E. Waln Hare, Vice President of National Securities & Research Corp.

August sales totaled \$6,835,462, representing a 74 per cent increase over the similar month last year.

TO MARKET, TO MARKET

When your wife goes out to shop tomorrow, remind her that this year she will buy half a ton of salt, two and a half tons of steel and over half a ton of paper.

If she gives you an argument, tell her we have it straight from the duPont Company. She may not lug it home in the baby carriage, but it will find its way into the home through such products as toothpaste, shoe leather, dyes, photo products and a thousand or more other commonplace things.

These big companies always get statistical, knowing very well that you and I are not in a position to question their figures. It's been a long time since I counted my last half ton of salt and that couple of tons of steel. Been sort of busy, but if you are of a mind to question them, here is what they say:

Each of us has upped his annual consumption of textile fibers from 24 pounds to 36 pounds in the last twenty years;

Each of us is using 1,400 pounds of steel a year;

We have upped our consumption of sulphuric acid one and a half times since 1939:

The average American uses about 25 pounds of synthetic or natural rubber a year;

And we have doubled our consumption of paper products since 1939, using an estimated 433 pounds a year per person.

Then there is that figure that the average family uses 3,213 gallons of petroleum a year, or 8.8 quarts per person per day. Of course that's not merely gasoline and oil for the car. It takes in some 500,000 compounds made from petroleum.



See page following 180a for actual clinical demonstration



For on-the-job relief of sore throat



BACITRACIN-TYROTHRICIN-NEOMYCIN-BENZOCAINE TROCHES

Sore throat patients want quick relief—and get it when you prescribe TETRAZETS troches. Given alone they are effective against mixed bacterial throat infections. In severe infections they are a useful adjunct to systemic antibiotics. Individually wrapped and easily carried, each TETRAZETS troche contains zinc bacitracin 50 units; tyrothricin 1 mg.; neomycin sulfate 5 mg.; anesthetic benzocaine 5 mg.



MERCK SHARP & DOHME

DIVISION OF MERCK & CO. INC. PHILADELPHIA 1. PA

SUMMERTIME SALES

A year ago the nation's summertime soft drink bill came to \$73,000,000 and the indications are we were even thirstier this summer. The grocery edition of "Chain Store Age" reports that an additional two to four million dollars was spent in food chains for canned soft drinks.

The four summer months are the big sales months, with 45 per cent of the colas, orange drinks and root beer passing over the counter in that period. Sales of other beverages in the soft drink field are better distributed over the year. Typical of the food chain pattern was ginger ale, 34.9 per cent in the summer months, lemon-lime 39.3 per cent, and club soda, 34.2 per cent. Colas are the most popular thirst quenchers, accounting for more than half the bottled soft drink sales.

Summer beer sales on the West Coast frequently surpass sales of frozen foods and in the East vacation resort stores of food chains report beer outselling canned vegetables.

A WORD FOR THE GARDENERS

If your garden was a disappointment this summer, possibly it was because you didn't have the services of prehistoric bats. Next Spring you will be more fortunate as the droppings of these ancient birds will be available as fertilizer. Great tons of it are being scooped out of the Grand Canyon.

It was left there millions of years ago by man-sized carnivorous bats that inhabited caves, or so we are assured by engineers. Now this so-called bat guano is a grayish-brown powdery substance with a high nitrogen content.

In the last two years \$1 million has been spent by a Toronto holding company, New Pacific Coal & Oils, Ltd., devising a way to get the guano out of the caves and into sacks for distribution. A tough engineering problem had to be solved since the caves were located in nearly perpendicular cliffs 650 feet above the Colorado River.

The solution involved construction of the longest single span cableway in the world to transport the guano to the top of another cliff 4,600 feet high where —Continued on page 134a



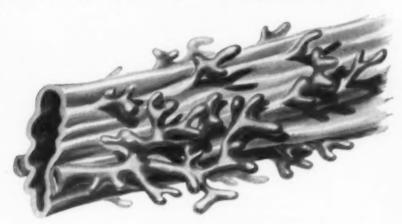
See page following 180a for actual clinical demonstration

MEDICAL TIMES

rediscovered:

the female urethra

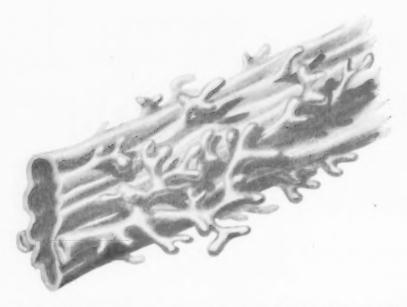
newer knowledge of its structure and cytology provides a clearer understanding of its important role in pelvic distress.



Schematic construction of female urethra demonstrating extensive network of periurethral glands, ending in numerous blind pockets. Drainage is into the urethra through small openings along its length, and into the para-urethral (Skene's) ducts.

Recent anatomic studies of the female urethra demonstrate a high susceptibility to infection.

A changing concept—The female urethra "was formerly considered only to be a short, simple, straight tube which served solely to empty the bladder. Recent studies have changed our notions concerning this sections through the urethra and its surrounding tissues have shown numerous glands."



Tortuous, with many interconnections but relatively poor drainage, these glands "form ideal foci for chronic infection." Periurethral gland infection is followed by infiltration and thickening of the urethral wall, hypertrophy and granulation of the urethral mucosa, and constriction of the urethral lumen. The trauma of childbirth and coitus further invites infection of these delicate structures, which are exposed to vaginal and rectal discharges "from the period of diaper life to old age." Thus, the urethra is not only a portal of entry for urologic infection, but the site of pathologic change "more frequently than any other portion of the female urinary tract."

Unrecognized source of pelvic symptoms—Prevalent as it is in women, chronic urethritis "can be easily overlooked" because of the frequency with which the pain and discomfort are referred to other areas.² In addition to obvious urinary tract symptoms such as frequency, urgency, pain and burning on urination, chronic urethral infection is often responsible for pain in the lower abdomen and pelvis, lumbosacral region or upper thighs.

BACTERIAL URETHRITIS YIELDS QUICKLY TO

FURACIN® Urethral Suppositories

brand of nitrofurazon

Insertion of these suppositories provides gentle dilation; the local anesthetic, diperodon, affords prompt and sustained relief of pain. The antibacterial, Furacin, achieves wide-spectrum bactericidal action without tissue toxicity. Each suppository contains Furacin 0.2% and 2% diperodon HCl in a water-dispersible base. Hermetically sealed in silver foil, box of 12.



2. Exfoliative cytology explains frequency of dyspareunia and other pelvic complaints in postmenopausal women.

Senile urethritis: often encountered, seldom described-A little known phenomenon has recently been reported by Youngblood and his colleagues. 4,5 Examining smears of epithelial cells from the urethrae of postmenopausal women, they found the same absence of normal, cornified, pyknotic squamous cells as in the vaginal smears, resulting from estrogen deficiency. Leukocytes and even erythrocytes were usually present, as in senile vaginitis. Along with these cytologic alterations, endoscopic examination revealed a hyperemic and atrophic urethral mucosa.

"Senile" urethritis is a common cause of dyspareunia, dysuria and other pelvic discomfort in postmenopausal women. Even when the urethra is recognized as the trouble spot, these women frequently fail to obtain relief because the underlying involutional nature of the urethritis is unsuspected, and antibacterial measures alone are employed. The lesion may resemble closely that of nonspecific urethritis.

"Progressive histologic normalization" parallels rapid symptomatic relief with new Furestrol Suppositories. In their investigations, Youngblood and co-workers 4.5 treated 120 postmenopausal, involutional urethritis patients with FURACIN Urethral Suppositories containing, in addition, 0.1 mg. of diethylstilbestrol. All showed prompt alleviation of symptoms, with disappearance of endoscopic signs of irritation. After 1 to 2 weeks' treatment, the urethral smears returned to normal, indicating replacement of the atrophic mucosa with a healthy, stratified squamous epithelium. These FURACIN-estrogen suppositories are now available as Furestrol Suppositories.





- 1. Pretreatment urethral smear of postmenopausal woman with senile urethritis. Basal cells with low nucleocytoplasmic ratio are predominant, with leukocytes and erythrocytes.
- 2. Urethral smear from same patient after 2 weeks' treatment with FURESTROL Suppositories. The cornified, squamous cells indicate a healthy, normal epithelium.

Ingredients work together-Furacin eradicated the low grade infection commonly present, while the diethylstilbestrol corrected the atrophic tissue changes. The excellent clinical results achieved with FURESTROL Suppositories could not be approached in control groups treated with suppositories from which any of the ingredients-FURACIN, estrogen, or diperodon, the local anesthetic-had been eliminated.

POSTMENOPAUSAL URETHRITIS YIELDS PROMPTLY TO

NEW FURESTROL "Suppositories

Provides estrogen to reverse the involutional changes of senile urethritis, plus the antibacterial, anesthetic and gently dilating action of the FURACIN Urethral Suppository. Each FURESTROL Suppository contains FURACIN 0.2%, diperodon · HCl 2%, and diethylstilbestrol 0.0077% (0.1 mg.), in a water-dispersible base. Hermetically sealed in orchid foil, box of 12.

REFERENCES: 1. Wharton, L. R. in Campbell, M.: Urology, W. B. Saunders Company, Philadelphia and London, 1954, Vol. 2, p. 1390 et seq. 2. Barrett, M. E.: J. M. Ass. Alabama 26:144, 1956. 3. Youngblood, V. H.: J. Urol. 70:926, 1953. 4. Youngblood, V. H.: Tomlin, E. M., and Davis, J. B.: Senile urethritia in women, J. Urol. (in press). 5. Youngblood, V. H.; Tomlin, E. M.; Williams, J. O., and Kimmelatiel, P.: Exfoliative cytology of the senile female urethra, Tr. Southeast. Sect. Am. Urol. Ass. (in press).

EATON LABORATORIES Em NORWICH, NEW YORK



trucks can take it the 75 miles to Kingman, Ariz., and big guano warehouses there.

U. S. Steel Corp. built the \$500,000 aerial tramway which stretches more than two miles. The record single span—without the support of steel towers—extends 3,377 feet.

The guano will be sucked through a pipe from the cave into a bin below. From there it will be shunted into the cable car that can transport about 40 tons in an eight hour day.

Frank Ruben, New Pacific president, says that although the chemical fertilizer market has been slow, demand for organic fertilizers, especially with a high nitrogen content, is always strong. Guano's nitrogen content is from 10 to 16 per cent. In addition, research has been carried on to determine whether the guano contains commercial quantities of pharmaceutical drugs.

"AIDED, BY BLINDNESS"

The board chairman of the Fanny Farmer Candy Shops, of Rochester, N. Y., which grosses nearly \$20,000,000 a year and is the largest manufacturing retailer of candies in the nation, asserts that he wouldn't be where he is now if he weren't blind. He is John D. Hayes,

who lost his sight thirty years ago when a tooth extraction resulted in a severe hemorrhage which destroyed an optic nerve. His candy business was four years old at the time.

"God's been good to me," Mr. Hayes says. "He's given me trust and faith,

when anxiety and tension "erupts" in the G. I. tract...

IN ILEITIS



PATHIBAMATE*

Combines Meprobamate (400 mg.) the most widely prescribed tranquilizer...helps control the "emotional overlay" of ileitis — without fear of barbiturate loginess, hangover or habituation...with PATHILON (25 mg.) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: 1 tablet t.i.d. at mealtime, 2 tablets at bedtime,

Supplied: Bottles of 100, 1,000.



 and the ability to treat people the way I would like them to treat me. And he blessed me with Mulla (his wife) and two good secretaries."

Mr. Hayes runs a company that has 3,700 persons on its payroll and shops in two hundred cities. In its first year he recalls the practice was to order 20 or 25 pounds of butter at a time and three, four or five gallons of cream when needed. Now a normal order is for a million pounds of butter and 150,000 gallons of cream. And the company isn't through growing. Plans call for the opening of 24 new shops and a new plant before the end of this year.

Mr. Hayes does not regard his affliction as a handicap, as he sees everything through his mind's eye. The three things that an executive does most are read, travel and make decisions. He does all three. He doesn't use Braille and his wife reads him everything from statistical tables to novels. He doesn't use a seeing eye dog and either his wife or a staff member accompanies him on his trips, which cover an estimated 30,000 miles a year and consist of visiting factory workers or salesgirls in his shops. At 74 he "knows" nearly every face in the business.

Associates attest to his prodigious memory for facts and figures and say he sifts them through like an IBM machine and then makes decisions. In the depression he slashed prices 50 per cent, which resulted in a sales jump of 150 per cent. In appearance he is like anyone else, so there is no uneasiness in personal contacts. In his plants and shops he knows where everything is, and delights in showing visitors about.

REMINDER-FOR 1982

Just in case it slips my mind, remind me in 1982 of the predictions of S. L. Sholley, president of Keystone Custodian Funds, Inc. Mr. Sholley's investment company has just celebrated its twenty-fifth anniversary, and at the birthday party he looked ahead for another 25 years and painted a rosy picture of our future.

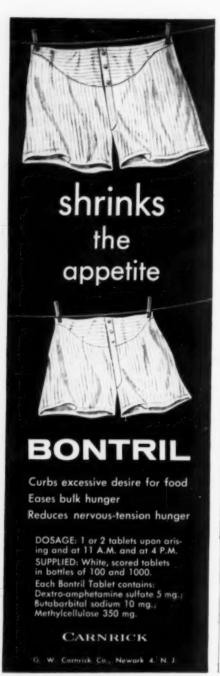
The American economy at that time will have a population of 257,000,000

compared with today's total of 171,000,-000, he believes. He expects 95,000,000 to be employed, against today's 66,000,000.

To care for the housing, feeding, clothing and general servicing of this population, he expects gross national product (the sum of all goods and services produced) to rise from the present \$430,000,000,000 to a resounding \$1,170,000,000,000. Note the ciphers.

What's in a Name?

If your broker suggests you buy a few shares of KoninMijke Luchtvaart Maatschappij N.V., don't send for the psychiatrist. He is referring to KLM Royal Dutch Airlines, recently listed on the Big Board. Its ticker symbol—you guessed it—KLM.



MODERN

THERAPEUTICS

Respiratory Tract Infections Treated with Chloramphenical

Aware of a wide difference of opinion concerning the ideal therapeutic agent for the various types of infection, the authors, A. H. Ioannidis and J. Mc Murdock of Edinburgh [British Medical Journal, 1:1157(1957)], conducted their own study using chloramphenicol for the treatment of acute respiratory infections. Eighty unselected patients with acute respiratory infection of mixed bacterial origin were chosen who had been admitted to the Royal Infirmary, Edinburgh. Of these patients, 54 had primary respiratory disease with acute exacerbation: in 26, the acute respiratory infection was complicated by another condition. Thirty-six of the patients had failed to respond to other therapy. For five days, 500 mg. of chloramphenicol were administered at six-hourly intervals. Clinical improvement was noted in 77 patients, in 73 of whom the infection was controlled for periods varying from one to eight months after treatment. Mild sideeffects occurred in five patients: no blood dyscrasias were detected. authors are of the opinion that the potential toxicity of chloramphenicol has been over-stressed. Negligible toxicity results from short courses of the drug; it should not be employed in prolonged

-Continued on page 138a



she needs support, too in nutrition during pregnancy and lactation

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vitaminimineral combination

She protects herself by taking the NATABEC Kapseals prescribed by her physician. NATABEC supplements good table fare to help promote better present and future health for the mother and her child.

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monomitrate		Amg	Vitimin Be (pyridentiae hydroxhloude). A mg.
Vitamin B., introBavin)		2 mg	. Vitamin C (ascorbic actri)
Vitamin d ₁₂ (mystalline)		2 mcg	Vitamin A
Folio acid		img	Intrinsic factor concentrate

cocago As a applement during pregnancy and throughout laccation, see as more Kaps at daily, Available in bottles of 100 and 1,000.



-Continued from page 136a

dosage or for trivial infections. It may well be that former avoidance of its extensive use now makes available an agent to deal with organisms frequently resistant to more commonly employed antibiotics.

Prednisolone Therapy in Ophthalmology

A report on the local use of prednisolone in various primary and postoperative inflammatory conditions in the eye is presented by Larry Turner of Durham, North Carolina [American Journal of Ophthalmology, 43:30 (1957)]. The report states Prednisolone, a hydrocortisone derivative, has

an anti-inflammatory action which is more than three to five times that of hydrocortisone. Twenty-five primary inflammatory conditions and 26 postoperative inflammatory conditions were treated. Prednisolone was used in the form of a bland ointment instilled in the eve three or four times daily. In the case of postoperative corneal transplants still being dressed, the ointment was used once a day. A few cases, apparently hypersensitive to the ointment base, responded immediately to treatment in the form of drops. In the group of patients observed at regular intervals, the duration of treatment varied from one week to seven months. Of the 25 patients with primary inflammatory conditions, 17 reacted favorably to treatment. Nongranulomatous uveitis was more responsive to prednisolone

bleeding gums abnormal diabetic and other capillary retinopathies permeability C. V. P. is a and fragility frequently specific aid in habitual and occur in the prevention threatened abortion and are and correction aggravated of capillary fault by . . . in such conditions gastrointestinal bleeding

epistaxis

than granulomatous uveitis. Traumatic iritis, allergic conjunctivitis, and keratoconjunctivitis responded satisfactorily, and phlyctenular keratitis improved on prednisolone in the form of drops. One case of a dendrite ulcer appeared after one month's use of the drug. Otherwise, a few instances of punctate keratitis were mild and superficial and did not require discontinuance of prednisolone. Of 26 cases of postoperative inflammatory conditions, 23 were benefited by prednisolone. Complications following cataract and glaucoma surgery responded well. Of 14 corneal transplants after which the drug was used, only one case failed to improve. No serious side-effects were noted. Inflammatory conditions of the anterior segment reacted more favorably than did those of the posterior segment.

Allergic conditions showed excellent response. In the entire group treated, conditions which had failed to respond to or had become refractory to other forms of steroid therapy yielded to topical prednisolone. Results appear to justify the continued use of prednisolone for these conditions.

Antiemetic Properties of Proclorperazine

Calling nausea and vomiting among the most distressing symptoms the patient may have to endure, the authors, D. G. Friend and G. A. McLemore, Jr., of Boston [AMA Archives of Internal Medicine, 99:732(1957)], report the results of their study of a new antiecetic agent, proclorperazine. Chlorpromazine and cyclizine, representatives respec-

-Continued on page 140a

CVP

Each C.V.P. capsule or each 5 cc. of syrup (approx. one teaspoonful) provides CITRUS BIOFLAVONOID COMPOUND 100 mg. ASCORBIC ACID (vitamin C) 100 mg.

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duo-CVP

(double strength C.V.P.)

Each duo-C.V.P. capsule provides:

CITRUS BIOFLAVONOID COMPOUND 200 mg
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C.V.P. helps diminish increased capillary permeability, fragility, and resultant bleeding by acting to maintain the integrity of the intercellular ground substance (cement) of capillary walls. C.V.P. is water-soluble and is thus readily absorbed and utilized. Purified hesperidin and rutin are poorly soluble in water. Hesperidin itself has been shown to be inactive in a number of biologic tests, in which C.V.P. is highly active. C.V.P. provides the many active water-soluble bioflavonoid factors of the whole citrus bioflavonoid complex.

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-Continued from page 138a

tively of the phenothiazine and the piperazine series, are both widely used as antiemetics. Proclorperazine combines the structural characteristics of these two agents, yielding a most gratifying degree of antiemetic activity. Twenty-five patients having suffered from nausea and vomiting for periods up to one year were given proclorperazine either orally, intramuscularly or rectally in a daily dosage of 40 to 100 mg. Intramuscularly or orally, 10 mg. were given every four to six hours, or a 50-mg, suppository was used once daily. The response was classified as "excellent" or "good" in 23 cases; in only two instances the results were less pronounced. Slight drowsiness was a common but usually desirable side-effect. In dosages higher than 60 mg. daily there were occasional complaints of confusion, dizziness, or fainting. One patient complaines of mild gastric irritation. No serious toxic reactions were encountered, and it is expected that fewer toxic effects will follow the use of proclorperazine since dosages are smaller than those required by other agents. The results of using this antiemetic seem to warrant its extended application.

Sintrom Evaluated

Although the soundness of the use of anticoagulant therapy for the treatment of thromboembolic disorders has been well established, the authors, E. C. Neill and his associates [Circulation, 15:713 (1957)], along with other clinicians.

—Continued on page 144a

POWER FOR PEAK THERAPEUTIC PERFORMANCE



EXPASMUS

Potentiated Mephenesin*

For relief of low back pain and other arthritic pain, for release of tension accompanying pain.

- · Relieves pain
- · Soothes tension
- Relaxes muscle spasm
 Each EXPASMUS tablet contains:

Dibenzyl succinate 125 mg., mephenesin 250 mg., salicylamide 100 mg. *Mephenesin physiologically potensified with a smooth muscle relaxant and analgesic . . . dibenzyl succinate

Dosage: 2 to 3 tablets 3 times daily to 13 tablets daily.

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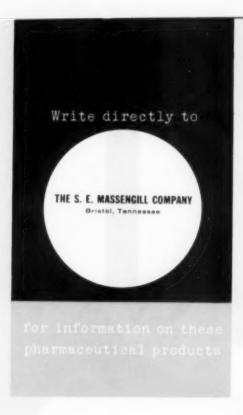
The leading symptom is: Would you prefer to receive only that pharmaceutical product information which you request? Presuming that you might, we're offering a method for you to control your mail.

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Just to remind you, over the page we've listed a number of the leading Massengill pharmaceutical products. Please write to us, if you want more information about any of them. THE S. E. MASSENGILL COMPANY

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Obedrin* To help the overweight patient establish correct eating patterns.

Homogenets[®] The only solid homogenized vitamins. Three formulas: prenatal, pediatric, and therapeutic.

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Salcort* Cortisone-salicylate therapy, without undesirable side reactions.

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BENYLIN EXPECTORANT contains in each fluidounce:

Benadryl® hydrochloride (diphenhydramine

hydrochloride, Parke-Davis) . . . 80 mg. Ammonium chloride 12 gr.

Sodium citrate 5 gr.

Chloroform 2 gr.

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PARKE, DAVIS & COMPANY - DETROIT, MICHIGAN

now-in atherosclerosis...

reduce plasma cholesterol

levels "safely" VUSTIUM

... "significantly"

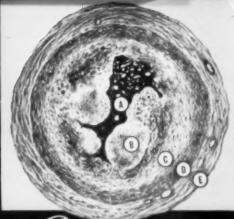
VASTRAN FORTE' offers an important new approach to the management of atherosclerosis, by providing nicotinic acid in high concentration to reduce plasma cholesterol levels. It also provides various factors of the B-complex to spark cellular metabolism1,4,7 and protect against latent vitamin deficiencies that may be precipitated by large dosage of a single B factor.3,7

Recent clinical evidence^{2,6} indicates that the administration of nicotinic acid in large doses "significantly" reduces plasma cholesterol levels in patients with hypercholesterolemia and causes the pattern of blood lipids to "change toward normal."6

In two independent studies^{2,6} embracing a total of 86 subjects, the administration of nicotinic acid brought about reduced plasma cholesterol levels in 81.4 per cent. As one report emphasized, nicotinic acid is "a safe drug" which can favorably alter the concentration of blood lipids in hypercholesterolemic patients.6

Among the disorders springing from long-standing hypercnolesterolemia are atherosclerosis, arteriosclerosis, gallstones, strawberry gallbladder and chronic degenerative lesions of the eye.8

MAMPOLE



(A) Reconstized thrombus in lumen (B) Atheromatous plaque (C) Fibrous intima (D) Media (E) Adventitia

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ORALLY EFFECTIVE PLASMA CHOLESTEROL REDUCER

In each VASTRAN FORTE' capsule:

Nicotinic acid	375.0 mg.
Ascorbic acid	50.0 mg.
Riboflavin	2.5 mg.
Thiamine mononitrate	5.0 mg.
Cobalamin concentrate(Vitamin B ₁₂ activity)	1.0 mcg.
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Pyridoxine hydrochloride	0.5 mg.

Dosage: Two capsules 4 times a day. Administration is limited to 6 months' duration. See literature available on request.

Supply: Bottles of 100 capsules.

References: 1. Agarwal, L. P., and Balt, K.: Am. J. Ophtholmol. 37:764, 1954. 2. Aitschul, R., Hoff, A., and Stephen, J. D.: Arch. Blochem. 54:558, 1955. 3. Gregory, J. J. Mantal Sci. 101:65, 1995. 4. J.A.M.A.: Gitlorial: Relationship of Vitamins to Enzymes 11:128, 1938. 5. Kgrs, A. J. Mt. Sinal Hosp., N. Y., 20-118, 1954. 6. Parsons, W. B., Jr., Achor, R. W. P., Berge, K. G., McKenzie, B. F., and Barker, N. W.: Proc. Staff. Meet. Mayo Clin. 31:377, 1956. 7. Sebrell, W. H., and Harris, R. S.: The Vitamins, Chemistry, Physiology, Pathology Academic Press, 1954. v. 2, p. 551. 6. Stambul, J.: The Mechanisms of Disease, Froben Press, New York, 1932, pp. 241, 280, 296, 295

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CLINICAL REPORT HIGHLIGHTS

In 18 patients whose concentration of plasma cholesterol was consistently higher than 250 mg. per 100 cc., the administration of nicotinic acid in high dosage reduced cholesterol levels significantly in 12.6 The pattern of blood lipids changed toward normal in the majority of the 18 patients.

The ratio of beta-lipoprotein cholesterol to alpha₁lipoprotein cholesterol decreased in 15 of the 18 patients.

Side effects were mild to moderate. Treatment was withheld for a few days in 2 cases, but was successfully resumed without recurrence of side effects.

It was concluded that nicotinic acid is a safe drug which may favorably alter the concentration of blood lipids in some patients with hypercholesterolemia.

When nicotinic acid was administered to 11 normal persons and 57 patients with various diseases, it reduced serum cholesterol levels in 58 of the 68 subjects. Hypercholesterolemic levels were more affected than normal levels.

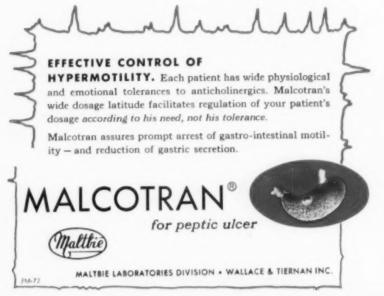
In contrast to nicotinic acid, nicotinamide was ineffective in reducing plasma cholesterol.

-Continued from page 140a

appreciate the value of more efficient prothrombin depressants, and outline what they consider to be the most important qualities that a drug of this type should possess: (1) Activity of prothrombin complex should be lowered rapidly to therapeutic range. (2) Effect should be maintained long enough to prevent fluctuations of prothrombin levels when the drug is administered in single daily doses. (3) Metabolism or excretion should be speedy enough to permit a rapid recovery of the prothrombin complex on cessation of therapy. (4) Its effect should be rapidly counteracted by the administration of a suitable pharmacologic antagonist. (5) Doses should be relatively constant in a given patient and from patient to patient. (6)

Oral administration should be effective. (7) It should be nontoxic and well tolerated in therapeutic dosages. A clinical study using Sintrom was made at the Pennsylvania Hospital, Philadelphia, on a group of unselected patients who required anticoagulant therapy. It was found that 2 mg. of Sintrom were usually equivalent to 25 mg. of other agents in prothrombin-depressant activity. In nearly all instances, Sintrom will produce a therapeutic hypoprothrombinemia in 48 hours or less. Therefore, for purposes of comparison, the induction phase was defined as those 43 hours between the initial dose and the second prothrombin determination after therapy had been started. Out of 71 inductions with Sintrom for which prothrombin times were available at the end of 43 hours, 67 patients (94 per cent) were in therapeutic range. The average mainte-

-Continued on page 146s



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AUREOMYCIN Topical Products provide safe, high-concentration broad-spectrum action at the site of potential or existing infection... promote faster healing and virtually eliminate odor in burns, abscesses, surgical incisions, amputations, and other wounds.

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For hospital, office or emergency use, pre-sterilized AUREOMYCIN Topical Products are always ready for instant application...are established favorites for convenient, efficient topical antibiotic therapy.



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CHLORTETRACYCLINE HYDROCHLORIDE

AUREOMYCIN Chlortetracycline–Impregnated Gauze Products – containing 2% Chlortetracycline Hydrochloride in a special, nonadherent, water-absorbent base—are available as—Strip Dressing—½" x 72", 2" x 108"; in glass jars. 8" x 12" Dressing—in individual aluminum foil envelopes. Packing—½" x 24", 1" x 36", and 2" x 36"; in glass jars.

AUREOSURGIC® Surgical Powder - Containing 50 mg. Chlortetracycline Hydrochloride per gram in a soluble base - is available in shaker-top bottles of 20 Gm.

SURGICAL PRODUCTS DIVISION AMERICAN CYANAMID COMPANY DANBURY, CONNECTICUT



-Continued from page 144a

nance doses required to keep the patients in the therapeutic range was 5.9 mg, which maintained the prothrombin activity at an average of 18 per cent of normal. In general, the results obtained with Sintrom were considered good: it is easily controlled, and the rapid onset of action and the 15- to 20-hour duration of effect are distinct advantages. The authors believe Sintrom to be worthy of consideration for general clinical use.

A Stable Formulation for Sulfadiazine Sodium Injection

A stable formulation for sulfadiazine sodium injection was reported by Hom and Autian in Bull. Am. Soc. Hosp.

Pharm. [14:177(1957)]. A series of formulations were prepared and studied for stability. The stability was evaluated on the basis of the development and intensity of color and the presence or absence of a precipitate.

The following formula was suggested: Sulfadiazine Sodium U.S.P. 250 Gm. Sodium Sulfite U.S.P. (Exsiccated) (or Sodium Formaldehyde Sulfoxylate) Water for Injection, to make 1000 ml.

Approximately 900 ml. of Water for Injection were heated to boiling in an all-glass apparatus and saturated to nitrogen while cooling to 35° C. The salts were dissolved and sufficient additional W.F.I. (nitrogen saturated) was added to bring to volume. The solution was then filtered through a sintered glass filter under a blanket of nitrogen and filled into ampuls and sealed under

-Continued on page 148a



HAYDEN'S VIBURNUM COMPOUND

. . . helps remove tension from nerve endings — corrects imbalance — restores normal muscle tone.

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MEDICAL TIMES



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- vitamins and minerals
 to help maintain cellular function
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*Freeman, J. T.: Features of Gerontology's Clinical Future, J.A.M.A. 161:948, 1956.



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-Continued from page 146a

nitrogen. Polyethylene glycol was found to enhance the stability but it was not included in the formulation because it had not been pharmacologically evaluated for safety in a formulation with a sulfonamide.

The Use of Meprobamate during Pregnancy

In their evaluation of Meprobamate (Miltown) the authors, H. A. Belafsky and his associates of Perth Amboy, New Jersey [Obstetrics and Gynecology, 9: 703 (1957)], have grouped the various disorders associated with pregnancy and have indicated the effects of Miltown in each group, according to trimester. The women were private patients in all stages of pregnancy, and were under constant supervision.

Nausea and Vomiting. By far these conditions are most frequently encountered in the first trimester. Of 196 patients, 180 were improved; in the second trimester, the figures were 35 of 42 patients, and in the third trimester, only two patients of 30 were not benefited.

Emotional Upsets. In this group of patients, Meprobamate was unusually effective. The percentages of improvement according to trimester were: first, 86 per cent; second, 90 per cent, and third, 86 per cent.

Leg Cramps and Numbness of Hands and Feet. The number of these patients who benefited, according to trimester, were: 43 of 49; 57 of 65, and 51 of 58.

Headaches. These patients reacted less favorably to Miltown, only 63 of 88 reported relief. It is believed that other factors may have been involved.

Insomnia. It was here that Miltown showed its greatest efficiency; only five

-Continued on page 152a

when anxiety and tension "erupts" in the G. I. tract...

in spastic and irritable colon



PATHIBAMATE

Combines Meprobamate (400 mg.) the most widely prescribed tranquilizer...helps control the "emotional overlay" of spastic and irritable colon—without fear of barbiturate loginess, hangover or habituation... with PATHILON (25 mg.) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: 1 tablet t.i.d. at mealtime. 2 tablets at bedtime. Supplied: Bottles of 100, 1,000.



Stubborn cases of PSORIASIS

RIASOL

RIASOL gives successful results in the treatment of obstinate psoriasis of long duration, even after other methods have failed. This statement is fully supported by clinical investigations.

When the patient is also put on a low fat diet, faster disappearance of the skin patches may be expected. Continued treatment minimizes recurrences.

Thousands of physicians have switched to RIASOL after trying it on a stubborn case of psoriasis. We suggest that you test RIASOL yourself and draw your own conclusions.

The formula supplies the standard skin alterative, mercury 0.45%, chemically combined with soaps for faster absorption. Antipruritic effect is provided by phenol 0.5%, while cresol 0.75% is antiseptic and aids in loosening the adherent scales.

Instruct your patient to apply a thin film of RIASOL* every night and rub in gently, after bathing and drying the area to be treated. No bandages are required. Supplied in 4 and 8 fld. oz. bottles at pharmacies or direct.

* T. M. Reg. U. S. Pat. Off.



BEFORE USE OF RIASOL



AFTER USE OF RIASOL

RIVOL SE

Test RIASOL Yourself

May we send you professional literature and generous clinical package of RIASOL. No obligation. Write

SHIELD LABORATORIES

Dept. MT-1057

12850 Mansfield Avenue, Detroit 27, Michigan

RIASOL FOR PSORIASIS

GERIACTIVE WITH NEW GERILETS



A FULL RANGE OF DIETARY AND THERAPEUTIC SUPPORT FOR OLDER PATIENTS

B-COMPLEX VITAMINS		
Thiamine Mononitrate	5 mg	
Riboflavin	5 mg	
Pyridoxine Hydrochloride		
Nicotinamide	20 mg	
Calcium Pantothenate	5 mg	
OIL SOLUBLE VITAMINS		
Vitamin A	1.5 mg. (5000 units)	
Vitamin D	12.5 mcg. (500 units	
Vitamin E	10 mg	
HEMATOPOIETIC FACTORS		
Bevideral" (Vitamin 8) with Intrinsic Factor C	1/2 U.S.P. Unit (oral)	
Ferrous Sulfate, U.S.P.	75 mg	
	0.25 mg	
The state of the s	0.23 mg	
CAPILLARY STABILITY		
Ascorbic Acid	50 mg	
Quertine* (Quercatin, Abbott)	12.5 mg	
LIPOTROPIC FACTORS		
Betaine Hydrochloride.	50 mg	
Inositol	50 mg.	
	oo ing.	
ANTI-DEPRESSANT		
Desoxyn* Hydrochloride	I mg.	
Methamphetamine Hydrochlo	oride, Abbatti	
HORMONES		
Sulestrex" (Piperazine Estrone Sulfate		
Mathyltoctoctorono	2 6 ma	

Streamlined into the smallest tablet of its kind







-Continued from page 148a

out of 102 patients failed to respond.

In the administration of Meprobamate individualization is essential. However, the average dosage was 400 mg. night and morning. In the series of patients treated, no side-effects were noted. According to the authors, Meprobamate appears to be a safe and effective medication for the prenatal period, and warrants further study.

The Resistance of Oral Lactobacilli

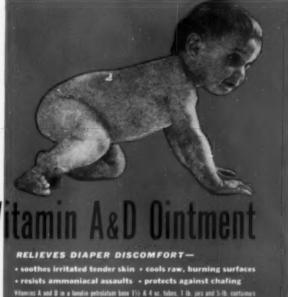
In vitro studies were undertaken to determine the resistance of strains of Lactobacillus casei to sodium fluoride

after initial isolation from human subjects and following serial transfers in media containing increasing concentrations of sodium fluoride. Green and Dodd reportde in J. Am. Dent. Assoc. [54:654(1957)] that initial tolerances of the organisms to sodium fluoride ranged from 0 to 10,000 ppm. Several strains were found to be able to develop resistance to sodium fluoride so that acid could be produced from glucose in a medium containing about 2 per cent sodium fluoride. The development of resistance was accompanied by some changes in colony and cellular morphology, but no apparent change in fermentative characteristics.

From these findings the authors concluded that it seems unlikely that lactobacilli in the mouth of an individual will come in contact with sufficiently

end diaper rash with White's V

WHITE Laboratories, Inc. Kenilworth, N. J.



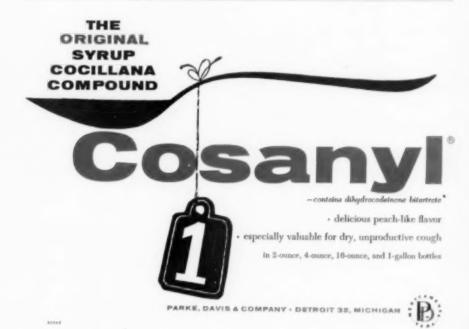
high concentrations of sodium fluoride to cause changes in the growth potential of the organism.

Postoperative Skin Protection with Dimethicone

Having used a number of types of skin protectants with a lack of uniform success, the authors, B. N. Carter II and R. T. Sherman of Cincinnati, AMA Archives of Surgery [75:116 (1957)], undertook a clinical evaluation of dimethicone (Silicone) an ointment containing 30 per cent of dimethicone in a petrolatum base. The advantages of the silicones from the standpoint of protection of the skin are their extreme moisture repellency, chemical, resistance, low toxicity, inertness, adherence, and thermal stability. The ointment

was used on 61 patients with 13 types of surgical lesions, such as colostomy, cecostomy, skin ulcers, abscesses, and fistulas. Application of the dimethicone was usually made at the time the dressing was changed. The severest areas of drainage required three applications during a 24-hour period. Results were considered excellent in 34 cases, good in 21, fair in one, and was without response in five. It is pointed out that the medication should be applied in the immediate postoperative period, even at the time of the operation if the discharge is expected to be particularly excoriating. No sensitiveness resulted from the use of dimethicone. and there was no indication of infection following its use. The ointment was found to be equally effective in cases of

-Continued on page 156s



ASYMPTOMATIC/ALER



Presently Accepted Antihistamine Groups

GROUP 1 · low potency / low sedation

GROUP 2 · moderate potency / moderate sedation

GROUP 3 · high potency / high sedation

And now... Ayerst announces a new group in antihistamines

GROUP 4 HIGH POTENCY SEDATION "THERUHISTIN"

Brand of Isothipendyl hydrochloride

single drug therapy with dual objective patients remain asymptomatic and alert

"THERUHISTIN" was effective in 92 per cent of 602 cases studied.* Good to excellent response was obtained in 80 per cent and fair in an additional 12 per cent. Average effective dosage was only 8 mg. daily. Duration of activity was about six hours per dose. Drowsiness was reported in only 0.8 per cent (5 patients).

In effect, only 1 out of every 100 patients reported drowsiness in the above study.

DOSAGE: Adults, 1 tablet or 2 teaspoonfuls (4 mg.) two to four times daily. Children, 1/2 to 1 teaspoonful, or 1/4 to 1/2 tablet (1 to 2 mg.) two to four times daily, depending on age and symptomatology.

SUPPLIED: Tablets, 4 mg., bottles of 100 and 1,000. Syrup, 2 mg. per 5 cc. (tsp.), bottles of 16 fluidounces.



AYERST LABORATORIES New York, N.Y. - Montreal, Canada

*New and Unused Therapeutics Committee, Am. Coll. Allergists: Interim Report at Thirteenth Annual Congress, Mar. 20-22, 1957, Chicago, Ill., Ann. Allergy, to be published. 5768

nervous indigestion G. I. SPASM

Convertin-H

Fortified Digestive Enzymes
WITH ANTISPASMODIC

Convertin-H fortifies gastric and pancreatic enzymes to aid digestion, and supplies an effective antispasmodic to combat the spasm.

Composition:

Each Convertin-H tablet contains:

In sugar-coated outer layer

Homatropine Methylbromide ...2.5 mg. Betaine Hydrochloride 130.0 mg. (providing 5 minims diluted Hydrochloric Acid U.S.P.)

Oleoresin Ginger . . . 1/600 gr.

In enteric-coated inner core

Dose: 1 or 2 tablets with or just after meals.

Supplied: In bottles of 84 and 500 tablets.

send for samples



B. F. Ascher & Co., Inc.

Ethical Medicinals

KANSAS CITY, MO.

MODERN THERAPEUTICS

-Continued from page 153a

continuous drainage from the alimentary or genitourinary tracts, or from the discharge of cutaneous ulcers. Efficacious though dimethicone has proven to be, the authors point out, it is not a substitute for diligent nursing care.

Chlorpromazine in Pediatric Surgery

Although the use of chlorpromazine in pediatrics had already been reported. the authors, F. Tevetoglu and J. A. Abbey of Corpus Christi, Texas, Journal of Pediatrics [51: 181 (1957)], wished to make their own observations on the effects of chlorpromazine administered as preoperative medication. One hundred children admitted to the Driscoll Foundation Children's Hospital for surgical procedures were given atropine and Demerol subcutaneously approximately one-half hour before the operation. Chlorpromazine had already been given by mouth two to three hours earlier. All patients were calm, and exhibited a sense of well-being; apprehension was markedly reduced. Repeated blood pressure readings revealed no hypertensive effects of the chlorpromazine. The period of induction of the anesthesia was smoother and shorter, and less of the anesthetic was required. Although no severe side-effects were observed in any of the group members. hypotension from the combined use of preanesthetic medications is a possibility that should be kept in mind, Of the 75 patients undergoing tonsillectomies and adenoidectomies, rapid relaxation of the jaw made insertion of the mouth gag and airway possible early

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PRODUCT INFORMATION

ROMILAR 'Roche'

NON-NARCOTIC COUGH SPECIFIC

DESCRIPTION: Romilar has a specific antitussive effect equal to that of codeine but it is non-narcotic; does not cause central depression, nausea, constipation or addiction. Chemically, Romilar Hydrobromide is <u>d</u>-3-methoxy-N-methylmorphinan hydrobromide.

INDICATIONS: Relief of cough.

ONSET: 15 to 30 minutes.

DURATION: 3 to 6 hours.

DOSAGE FORMS: Syrup (15 mg/5 cc); expectorant (15 mg Romilar and 90 mg

NH₄C1/5 cc); tablets (15 mg).

DOSAGE	1 to 4 times daily
Adults	15 to 30 mg (1 to 2 tabs. or teasp.)
Children (1 to 4 years)	3.75 to 7.5 mg (1/4 to 1/2 teasp.)
Children (over 4 years)	7.5 to 15 mg (½ to 1 teasp.)

SUPPLY: Romilar Syrup, butterscotchflavored, is supplied in bottles of 4 and 16 oz. Romilar Expectorant, fruit-flavored, is supplied in bottles of 16 oz. Romilar Tablets, sugar-coated, are supplied in packages of 20 and 100.

Romilar® Hydrobromide-brand of dextromethorphan hydrobromide

Hoffmann-La Roche Inc · Nutley 10 · New Jersey

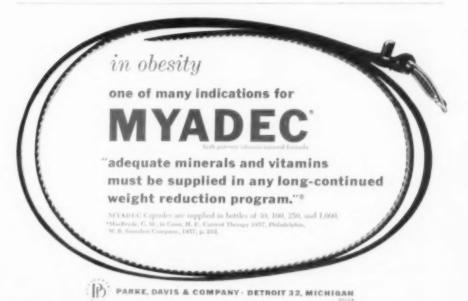
in the operative procedure. It was noted further that there was not the excessive amount of oral and oropharyngeal secretion that increase the difficulties of giving an anesthetic to children. There was less bleeding during the operation, and mild or no post-operative nausea. Also, since the children remained somewhat drowsy from four to six hours, the usual postoperative excitement did not occur, and no sedatives were required.

Prostatic Carcinoma Treated with Estradurin

The Swedish investigators, G. Jonsson and his associates, Acta Chirurgica Scandinavica [113: 68 (1957)], have issued a preliminary report of their findings to date on the treatment of prostatic carcinoma with the estrogenic preparation, Estradurin. This preparation which is administered in the form of injections is preferable, the authors believe, to the oral estrogens which the

patient may neglect to take, especially since dyspeptic symptoms frequently follow their ingestion. Although Estradurin has been used for more than a year for patients suffering from carcinoma of the prostate, the present report covers 26 patients not previously treated with hormones, and 15 patients who had received other estrogen therapy. The average dosage was 80 mg, of Estradurin administered once a month by intramuscular injection. At this time the patient's condition was examined carefully and recorded. The drug was well tolerated. The only side-effect was tenderness at the site of injection, a reaction which may well have been caused by injection trauma. No local lesion was seen at the site of injection; no edema was noted. The estrogenic effect was pronounced in the majority of cases, In the group of 26 patients, 19 showed marked, clinical improvement, especi-

-Continued on page 158a



-Continued from page 157a

ally as regards dysuria and general condition. In the second group of 15 patients, the clinical effect of Estradurin was entirely satisfactory. In general, the effects of Estradurin have been found to be superior to those of the estrogen preparations formerly in use. Another advantage is the strict watch which is kept on the patient, with the guarantee of uninterrupted treatment. The authors appreciate the fact that the period of observation has been comparatively short, and that further study is desirable.

"We are indebted to A. B. Leo, Halsingborg, Sweden, for placing this preparation at our disposal."

Diamox as an Oral Diuretic

Since the introduction of mercurial diuretics, clinicians have sought an oral agent that would be effective in a single daily dose. Among these investigators, the authors, W. S. Braveman and his associates of New York City, American Heart Journal [54:284(1957)] consider that Diamox (acetazoleamide) not only fulfills this criterion, but also has proved to be safe and free of disturbing side-effects in the dosage used. Twentyone clinic patients with edema secondary to congestive heart failure were chosen for the study; they were all receiving digitalis on a maintenance basis. Diamox in the form of a 250-mg. tablet was taken on alternate days. Patients were examined at clinic visits. They have been treated from one to one

-Continued on page 160a

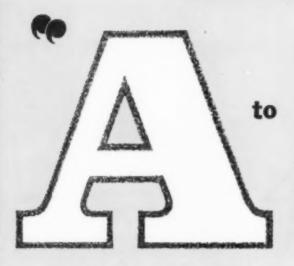


WHAT'S YOUR VERDICT?

(From page 35a)

The Court of Appeals entered an injunction against the defendants, holding: "The statute provides that the board shall be selected at the annual meetings of the society; and that each member shall serve for four years, or until his successor is appointed and qualified. Consequently, those elected to the board at the 79th annual meeting and who have not resigned or who have not legally been removed are still members of the board. The members of the society had no authority to vary this provision of the statute in regard to the length of the term of office of the board members."

Based on decision of Court of Appeals of an Eastern State





control of urinary tract infections

through comprehensive

tetracycline-sulfonamide-analgesic action

AZOTREX is the only urinary anti-infective agent combining:

(1) the broad-spectrum antibiotic efficiency of TETREX—the original tetracycline phosphate complex which provides faster and higher blood levels;

(2) the chemotherapeutic effectiveness of sulfamethizole—outstanding for solubility, absorption and safety;

(3) the pain-relieving action of phenylazo-diaminopyridine HCI—long recognized as a urinary analgesic.

This unique formulation assures faster and more certain control of urinary tract infections, by provid-

ing comprehensive effectiveness against whatever sensitive organisms may be involved. Indicated in the treatment of cystitis, urethritis, pyelitis, pyelonephritis, ureteritis and prostatitis due to bacterial infection. Also before and after genitourinary surgery and instrumentation, and for prophylaxis.

In each AZOTREX Capsule:

TETREX (tetracycline phosphate complex)...125 mg.

Sulfamethizole (tetrocycline HCI cetrolty)
Sulfamethizole 250 mg.
Phenylazo-diamino-pyridine HCI 50 mg.

Min. adult dose: 1 cap. q.i.d.

Listrature and clinical

BRISTOL LABORATORIES INC., SYRACUSE, N.Y.



Azotrex



the most comprehensive capillary protectant and correctant available. Helps reduce excessive capillary permeability, fragility and bleeding . . . by acting to increase capillary strength and resistance in . . .

- · threatened and habitual abortion
- · "little strokes"
- hypertension
- · diabetic retinitis
- rheumatoid arthritis
- aging
- aids in relief of common cold symptoms

Each CAPILON Tablet provides:

Lemon Bi	oflavonoid	ı	C	0	п	n	p	le	×					100	mg.
Rutin (b)	oflavonoid	1)	,	*		,	×	*			*		100	mg.
Ascorbic	Acid	. ,	×	*				8		*	*	×		100	mg.

Bottles of 100, 500 and 1000

Write for CAPILON samples and literature.

The PAUL PLESSNER COMPANY 1627 West Fort St. Detroit 16, Mich.

MODERN THERAPEUTICS

-Continued from page 158s

and one-half years, and are presently well maintained on Diamox therapy. The side-effects usually noted-paresthesias, anorexia, drowsiness have not occurred. When Diamox is used as a diuretic it must be noted that its inhibition of carbonic anhydrase activity in the renal tubular cells results in a decreased reabsorption of bicarbonate ions which is responsible for its diuretic activity. In order for the drug to produce a renal response, time for restoration of the acid-base balance must be allowed, an interval usually of 24 to 48 hours. In the group of patients studied, Diamox, as administered, proved satis-

-Concluded on page 163a



See page following 180a for actual clinical demonstration

MEDICAL TIMES



for any child of any age in the vital first decade

The 'Deca-'Vitamin Family

three convenient dosage forms of 10 significant vitamins for comprehensive protection

is easy to specify because:

one basic name to remember-'Deca-'

one basic formulation

one standard of comprehensive protection

No refrigeration required • Special process assures stable B₁₂ in solution with C • Hypoallergenic Unbreakable plastic 'Safti-Dropper' supplied with Deca-Vi-Sol

Deca-Mulcino

Teaspoon dosage with delicious orange flavor

Deca-Vi-Caps®

Capsule dosage - small, easy-to-swallow capsules

Deca-Vi-Sol®

Dropper dosage with new, improved taste: "Best taste yet"

MEAD JOHNSON

SYMBOL OF SERVICE IN MEDICINE

patients with colds...sinusitis...rhinitis...

will appreciate the

"Novahistine effect"

When a patient stops sniffling and begins to breathe freely in a matter of minutes...with all air passages clear and no sense of jitteriness or nasal irritation...he is experiencing the "Novahistine Effect."

THIS EFFECT IS PRODUCED BY

fast...effective decongestion

...combined with antihistaminic therapy for synergistic action

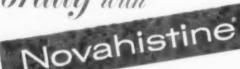
fuller utilization of medication through systemic action

...on all mucous membranes of the respiratory tract

safe...easy-to-use...ORAL dosage

unplug that
stuffed-up nose

orally with





PITMAN-MOORE COMPANY DIVISION OF ALLIED LABORATORIES, INC. INDIANAPOLIS 6, INDIANA



Each 5 cc. teaspoonful of the elixir or each tablet provides 5.0 mg, of phenylephrine HCl and 12.5 mg, of prophenpyridamine maleate. Novahistine Fortis Capsules provide twice the amount of phenylephrine when more potent nasal decongestion is desired.



-Concluded from page 160s

factory in maintaining optimal body weight; neither side-effects nor significant alterations in plasma electrolyte concentrations were observed.

Treatment of Acute Respiratory Infection with Chloramphenical

Eighty patients with acute respiratory infections of mixed bacterial origin were treated with chloramphenicol in a dosage of 500 mg. four times a day for 5 days. Clinical improvement was obtained in 77 patients. Three patients were unimproved by the antibiotic treatment and 3 relapsed within one week.

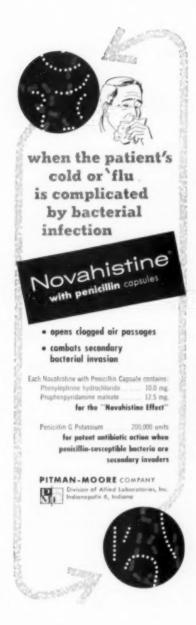
Side effects were minimal. Dry mouth was reported by three patients, a mild skin rash in one, and slight transient diarrhea in one. No blood dyscrasias of any kind were detected.

Ioannidis and Murdoch concluded, in Brit. Med. J. [No. 5028:1157(1957)], that the potential toxicity of chloramphenicol has been overstressed. They felt that chloramphenicol has a definite place in the short term therapy of acute respiratory infections.

MEDIQUIZ ANSWERS

(from page 77a)

1 (B), 2 (A), 3 (C), 4 (C), 5 (B), 6 (A), 7 (B), 8 (D), 9 (B), 10 (C), 11 (C), 12 (B), 13 (B), 14 (D), 15 (D), 16 (A), 17 (C), 18 (A), 19 (C), 20 (B), 21 (D), 22 (D), 23 (B), 24 (D), 25 (D), 26 (D), 27 (D), 28 (C), 29 (D), 30 (B or D), 31 (B), 32 (B), 33 (B), 34 (D).



Diagnosis, Please

ANSWER

(from page 25a)

Sarcoid

Note large nodes in the parahilar regions with sarcoid lesions in the fingers.

in any urinary tract disorder Pyridium is the specific for fast relief of pain, urgency, frequency and burning

Pyridium

Pyridium brings relief within 20-25 minutes. Pyridium is compatible with and complementary to all specific therapies, whether medical or surgical. With Pyridium you have greater flexibility in the use of any potency or dosage schedule required for successful treatment.

Dosage: 2 tablets before each meal.

Supplied: Bottles of 12, 50, 500 and 1,000.



See page following 180a for actual clinical demonstration

Nothing is quicker...

Nothing is more effective . . .

In Asthuma

MEDIHALER-EPI®

Epinephrine bitartrate 7.0 mg. per cc., suspended in inert, nontoxic aerosol vehicle. Contains no alcohol. Each measured dose 0.15 mg. actual epinephrine.

For quick relief of bronchospasm of any origin. Acts more rapidly than subcutaneous epinephrine in acute allergic reactions.



THE MEDIHALER PRINCIPLE

Automatically measured-dose aerosol medications. In spillproof, leakproof, shatterproof, vest-pocket size dispensers. Also available in Medihaler-PhenTM (phenylephrine-phenylpropanolamine-hydrocortisone-neomycin) for prompt, lasting relief of nasal congestion.

MEDIHALER-ISO°

Isoproterenol sulfate 2.0 mg. per cc., suspended in inert, nontoxic aerosol vehicle. Contains no alcohol. Each measured dose 0.06 mg. actual isoproterenol.

Unsurpassed for rapid relief in asthma, bronchiectasis, emphysema.

> Prescribe Medihaler medication with Oral Adapter on first prescription. Refills available without Oral Adapter.



LOS ANGELES

Microscopic Examination







when the 'jelly-alone' method is advised, NEW Koromex the outstandingly competent spermatocidic agent.....is now available to physicians.



The beautiful sippered plastic bit - originated by H.II the modern way to store the jelly and the applicator.

bhoven

MOUEN

phoven

bhoven

availability, another H-R "first"...

Large tube of Karomex vaginal jelly, 125 grams, with patented measured dose applicator, is supplied in a washable, appealingly feminine zippered kit, at na extra charge, for home storage.

The 125 grow tube of Koromex to may also be bought separately at any time

Factual literature sent upon request

active ingredients:

in a special barrier type base

142 HUDSON STREET, NEW TORK 15, N. T. HOLLAND-BANTOS CO. INC.

NEWS

AND

NOTES

Wisconsin Researchers Studying Animal Tumors

A naturally occurring plant hormone is being used by University of Wisconsin scientists to inhibit the growth of laboratory—induced plant and animal tumors.

The hormone, at present named "antiauxin," has been effective in preventing experimental tumors caused by more than 100 chemical agents.

Scientists R. H. Roberts, Louise Wipf, and B. Esther Struckmeyer, reporting their results to fellow scientists at the American Institute of Biological Sciences, meeting at Stanford University, point out that the hormone also limits the development of experimental skin tumors on mice caused by such animals carcinogens as 3-4 benzopyrene and methylcholanthrene.

In addition to causing skin tumors on mice, these chemical agents also caused a swelling of lymph nodes, kidney, and spleen. These structures were held to near normal sizes when the antiauxin was applied.

The chemical agents were found to produce a marked reduction in the fat content of the treated animals. When antiauxin was used, however, the hormone was highly effective in protecting the mice from this loss.

It is necessary to use very dilute applications of the hormone—from 25-50 thousandths of one per cent—to obtain the best control, the scientists point out.

Both the chemical agents and the antiauxin are fat soluble, the scientists explain. This suggests that the origin of tumorous growth lies in the field of fatty metabolism, they add.

When the normal fatty physiology is disturbed, especially if the disturbance is prolonged, tumorous growths can arise.

Judging from the effect the antiauxin has in controlling a wide range of tissue disturbances, the UW scientists suggest that the hormone plays a role in keeping tissue normal.

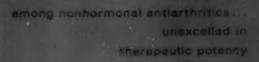
It could, consequently, be a member of a protective or repair mechanism of the organism, they point out.

New Theory on Potential Suicides

A change in the normal sleep pattern of depressed persons which is expressed in early morning awakening, may be one prelude to a suicide attempt, according to Dr. Henry P. Laughlin, Associate Professor of Psychiatry at George Washington University Medical School.

Writing in a recent issue of State of Mind, Dr. Laughlin noted that some potential suicides may wake one to four hours earlier than usual, a phenomenon which may continue for several months during the course of a depression. Laughlin declared that this warning symptom may be accompanied by a "morning ebb tide" of spirits in which the patient experiences his worst difficulty, followed by an improved mental outlook in the afternoon or evening.

-Continued on page 171s



BUTAZOLIDIN°

The second section

In the nonhormonal treatment of arthritis and allied disorders no agent surpasses.

BUTAZOLIDIN in potency of action.

Its well-established advantages include remarkably prompt action, broad scope of usefulness, and no tendency to development of drug tolerance. Being nonhormonal, BUTAZOLIDIN causes no upset of normal endocrine balance.

BUTAZOLIDEN relieves pain, improves function, resolves inflammation in: Gouty Arthritis Rheumatoid Arthritis Rheumatoid Spondylitis Painful Shoulder Syndrome

BUTAZOLIDIN being a potent therapeut agent, physicians unfamiliar with its use are arged to send for detailed literature before instituting therapy.

BUTAZOLSDIN® (phenylbutazone GEIGY). Red coated tablets of 100 mg.

GEIGY

Ardsley, New York





Give your patient that extra lift with "Beminal" Forte 817

-Continued from page 168a

According to statistics, early morning seems to be the favorite time for self-destructive actions. The extremely depressed patient who undergoes the most radical emotional "lift" throughout the day is the one most likely to commit suicide, Laughlin declared.

A decreased level of interest, withdrawal and difficulty in talking about problems, were listed as other presuicidal danger signs in depressed patients. The patient loses interest in all kinds of things, shuns family, friends and business associates and keeps his desperate state to himself, Dr. Laughlin pointed out. He added that it is the very bottled-up person who is more likely to take his life than the man who confides in his doctor.

Noting that depression recurs frequently, Dr. Laughlin suggested that the most effective solution was to lead the patient into psychotherapy. "But even when the depressed patient can be referred." said Laughlin, "his characteristic lack of interest and his decreased ability to communicate affect the therapeutic endeavor adversely." Statistics show that ill health is the suicide motive in 40% of the males and 20% of the females; domestic difficulties in 30% of the males and 50% of the females: while unhappy love affairs cause 4% of male suicides and 10% of female suicides. Altogether, three times as many men as women commit suicide in the United States.

Noting that suicide figures are very high despite efforts to conceal such

-Continued on following page



When high vitamin B and C levels are required give your patient that extra lift with "Beminal" Forte.

"Beminal" Forte-each capsule contains:

Thiamine mononitrate (B1)	25.0 mg.
Riboflavin (Bz)	12.5 mg.
Nicotinamide	75.0 mg.
Pyridoxine HCl (Bs)	3.0 mg.
Calc. pantothenate	10.0 mg.
Vitamin C (ascorbic acid)	150.0 mg.
Vitamin B12 with intrinsic factor	
concentrate 1/9 U	S.P. Unit

Improved formula



Dosage: 1 to 3 capsules daily, or more, depending upon the needs of the patient.

Supplied: No. 817—Bottles of 100 and 1,000 capsules.





New York, N. Y. . Montreal, Canada

HALIMIDE*

the CONCENTRATE with the TWOFOLD ACTION

For Instrument Disinfection

BACTERICIDAL

—when diluted with water (except the tubercle bacillus)

TUBERCULOCIDAL also-

when diluted with alcohol

*Trademark of Bard-Parker Co., Inc.

PLUS—these other important advantages . . .

NON-CORROSIVE

-No anti-rust tablets to add.

STABLE

-Need not be changed frequently.

ECONOMICAL

-1 oz. makes 1 gal. of solution.

Bard-Parker HALIMIDE is the result of years of research to develop a concentrate combining maximum bactericidal potency and trouble-free performance. IT'S ECONOMICAL ... any way you look at it!

LIST PRICE

4 oz. bottle \$2.50

Please ask your dealer for quantity discounts.





HALIMIDE and your INSTRUMENTS . . . THEY COMPLIMENT EACH OTHER

NEWS AND NOTES

-Continued from preceding page

deaths, Laughlin urged family physicians to pay greater attention to estimating the dangers when patients talk of suicide. In one population group, white males between 15 and 44 years of age, suicide ranks fifth as a cause of death, Dr. Laughlin revealed.

"Because it's easy to become discouraged in treating a depressed patient, it will help to remember that efforts to save such patients from themselves are worthwhile, for depression often strikes at the kind of person society needs most," Dr. Laughlin declared,

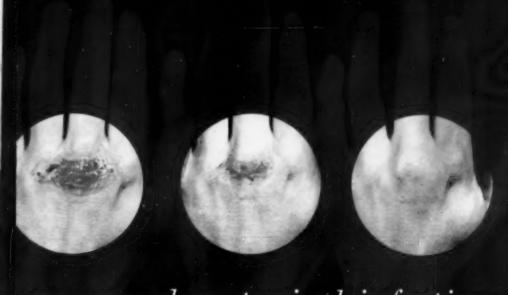
Radioisotope Techniques for Cadiac and Blood Studies Described in Report

A radioisotope technique for determination of cardiac output which is said to offer "virtually unlimited potential" in the diagnosis and control of heart disease is described in a report of Air Force-sponsored aeromedical research.

The non-traumatic method utilizes injection doses of radioionated human serum albumin (RISA). Simple and highly accurate, the technique can be used to demonstrate precisely the variations of cardiac output under stress and response to medications, according to the report. It is reproducible to about 6.0 percent in individual patients.

Also described is a method for measuring the volume of whole blood, plasma, and red cells which eliminates the complex plasma separations and washing and drying of erythrocytes

-Continued on page 174a



you can clear topical infections promptly with **NEO-POLYCIN**

pecause NEO-POLYCIN provides three preferred topical antibiotics

NEOMYCIN BACITRACIN POLYMYXIN



in a unique base which releases greater antibiotic concentrations than ordinary grease-base ointments

†Effective against the entire range of bacteria found most often in topical lesions. Proved by clinical use in pyoderma, folliculitis, paronychia, sycosis barbae, impetigo; also in secondary bacterial infections complicating treatment of burns, eczemas, contact dermatitis, seborrhea, acne, psoriasis, varicose ulcers and neurodermatitis.

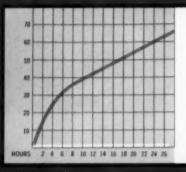
PITMAN-MOORE COMPANY

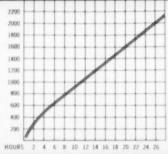
...increased antibiotic concentrations for greater effectiveness in topical lesions

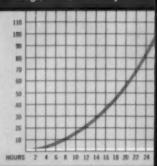




mcg./ml. of Neomycin







-antibiotics released from NEO-POLYCIN's special base.

—antibiotics released from grease-base ointment. NEO-POLYCIN's unique Fuzene base permits maximal diffusion of its antibiotic content, and a higher antibiotic concentration at the site of infection than is possible with conventional grease-bases, which can release only a small fraction of their contained antibiotics. The above graphs indicate the relative amounts of neomycin, polymyxin, and bacitracin made available to the tissues from Neo-Polycin's special base and from an ordinary grease-base ointment.

NEO-POLYCIN*

(polymyxin-bacitracin-neomycin ointment)

covers the entire range of bacteria most often found in topical lesions

- · low index of sensitivity
- no appreciable absorption and little danger of systemic toxicity
- · nonirritating to tissue
- · active in presence of blood and pus
- · diffuses readily into exudates



Each gram of Neo-Polycin Ointment contains 3 mg. of neomycin, 8000 units of polymyxin B sulfate and 400 units of bacitracin in the unique Fuzene base. Supplied in 15 Gm. tubes. (Also supplied as Neo Polycin-HC, containing 1% hydrocortisone acetate, in 5 Gm. tubes.)

Neo-Polycin and Neo Polycin-HC ophthalmic ointments (anhydrous, lanolin-petrolatum base) are supplied in ½ oz. tubes.



PITMAN-MOORE COMPANY

DIVISION OF ALLIED LABORATORIES, INC. . INDIANAPOLIS 6, INDIANA

in a matter of minutes



Attacks the Cause Alleviates Pain Arrests Infection

Relief in all URINARY DISORDERS Patients—in all age groups respond readily to the 3 "A"s of URISED. It is effective in virtually all forms of urinary disturbances—even those complicated by serious systemic disease.¹

ATTACKS THE CAUSE—In minutes, URISED attacks both primary causes of pain and dysfunction: (1) smooth muscle spasm; (2) incidence of infection.

ALLEVIATES PAIN - Prompt antispasmodic action relaxes painful smooth muscle along the urinary tract, brings quick relief to the distressed patient.

ARRESTS INFECTION—Rapid antibacterial action reduces irritation, even overcomes infections previously resistant to antibiotics and sulfonamides.

Prescribe URISED with confidence to relieve frequency, burning, urgency, dysuria, promote rapid restoration of normal urinary function in all urinary affections of all age groups.

I. Straum, B., Clin. Med., Vol. IV, No. 3, 1967

CHICAGO PHARMACAL COMPANY

Chicago . San Francisco



No laxative works properly unless the colon is supplied with sufficient non-irritating bulk of medium soft consistency to promote a more normal peristaltic pattern. L. A. FORMULA provides just such an effective, smooth bulk.

In most instances, L. A. FORMULA by itself insures regular easily passed stools that are associated with a minimum of peri-anal soiling.²

But regardless of what laxative you prescribe—lubricant, mucosal irritant, or other type of bowel stimulant—a moist, smooth bulk is *still* essential to normal evacuation.³

That's why we say-to normalize

prescribe ... L. A. Formula

either alone, or
with the laxative of your choice

References

- Dolkart, R. E., Dentler, M., & Barrow, L. L., III. Med. L., 90.28s. 1946
 - 2. Cass, L. J., & Wolf, L. P., Gastroenterology, 20:149, 1952
 - 3. Wozasek, O., & Steigman, F., Am. J. Digest. Dis., 9:423, 1942



NEWS AND NOTES

-Continued from page 172s

characteristic of earlier approaches. The venous hematocrit determined by RISA is utilized to compute the specific activity of chromium-51 tagged red cells. Through use of a concentrated ACD (C-ACD), erythrocyte tagging, injections and sampling can be completed in about 35 minutes.

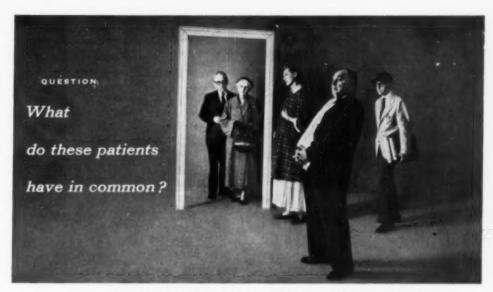
French Government Honors Founder of International College of Surgeons

Dr. Max Thorek, Chicago surgeon and founder of the International College of Surgeons, has been honored by the French Government with the award of

-Continued on page 176s



See page following 180a for actual clinical demonstration



ANSWER: DISTURBED DIGESTIVE PHYSIOLOGY

They are the pregnant, the aged and the sedentary patient, or the fatty foods fan, who frequently display the classic symptoms of biliary stasis — dyspepsia, eructation, nausea and flatulence.

Cholan V combines two therapeutic actions:

- Hydrocholeretic action of dehydrocholic acid to produce an abundant flow of fluid bile.
- Spasmolytic action of homatropine methylbromide in new therapeutic dosage (5 mg.) for greater effectiveness without sacrifice of safety—to facilitate drainage.

Cholan V provides physiologic biliary tract lavage.



Each tablet contains 250 mg. Cholan DH[©] (dehydrocholic acid Maltbie) and 5 mg. homatropine methylbromide. One or two tablets t.i.d., after meals. Bottles of 100, 500 and 1,000.

Hydrocholeresis is contraindicated in certain types of jaundice and in complete bile duct obstruction.

Also available: Cholan DH® (250 mg. dehydrocholic acid) for hydrocholeresis. Cholan HMB (250 mg. dehydrocholic acid, 2.5 mg. homatropine methylbromide, ¼ gr. phenobarbital) for hydrocholeresis, spasmolysis and sedation.

Write to Professional Service Department for free sample supply.



MALTBIE LABORATORIES DIVISION WALLACE & TIERNAN, INC.

Belleville 9, New Jersey

to prevent and/or control



Dramamine'

Brand of Dimenhydrinate

All 8,849 patients received the Dramamine routine:

This consists of administration of 1 cc. (50 mg.) of dimenhydrinate intramuscularly on call to surgery, of 1 cc. (50 mg.) intramuscularly on return from surgery, and then 1 cc. (50 mg.) intramuscularly every four hours for four doses. . . . dimenhydrinate has reduced the incidence of postoperative vomiting by approximately 50 per cent.

Moore, D. C., and Others: Intramuscular Use of Dimenhydrinate (Dramamine) to Control Postoperative Vomiting, J.A. M.A. 159: 1342 (Dec. 3) 1955.

Dramamine Ampuls, serum type, 250 mg. in each 5 cc.

SEARLE

Research in the Service of Medicine

NEWS AND NOTES

-Continued from page 174a

Commander of the Legion of Honor for his important contributions to surgery and his outstanding work in the formation and growth of the College, "creating a better understanding and scientific cooperation among surgeons of the world."

Dr. Thorek, a member of leading medical and surgical organizations all over the world and author of many textbooks on surgery, founded the International College of Surgeons 22 years ago at Geneva, Switzerland. Since then it has established chapters in 42 countries, excluding Russia and its satellites, and has a membership of 12,000 surgeons.

Several years ago Dr. Thorek conceived the idea for an International Surgeons' Hall of Fame. A four-story museum housing surgical memorabilia of the world, combined with a School of History of Surgery and Its Related Sciences, was established adjacent to the College headquarters at 1516 Lake Shore Drive, Chicago.

Dr. Thorek serves as Secretary-General of the College and as editor of its official Journal and other publications. He also is President and chief surgeon of the American Hospital, which he founded.

VA Research on Mental Patients

Many needed answers about the effectiveness of various methods of treating mental patients may be supplied by nation's doctors through a new yardstick developed by Veterans Administration.

-Continued on page 178a

WANTED



RELIEF FROM ACNE

Fostex' is an essential adjunct to treatment

IN ACNE, Fostex Cream and Fostex Cake

- · degrease, peel and degerm the skin
- · unblock pores . . . help remove blackheads
- help prevent pustule formation
- · minimize spread of infection

Fostex effectiveness is provided by Sebulytic* (sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate, sodium dioctyl sulfosuccinate) a new combination of surface active cleansing and wetting agents with remarkable antiseborrheic, keratolytic and antibacterial action, enhanced by sulfur 2%, salicylic acid 2% and hexachlorophene 1%.

Fostex is easy to use. The patient stops using soap on acne skin and starts washing with Fostex. Effective and well tolerated...assures patient acceptance and cooperation.

FOSTEX CREAM for therapeutic washing of the skin in the initial phase of the treatment of acne, when maximum degreasing and peeling are desired.



4.5 oz. iara

FOSTEX CAKE for maintenance therapy to keep the skin dry and substantially free of comedones.



In bar form

WESTWOOD PHARMACEUTICALS

Division of Foster-Milburn Co.

467 Dewitt Street

Buffalo 13, New York

Continued from page 176a

Psychologists and psychiatrists at 12 VA neuropsychiatric hospitals have designed and successfully tested a form on which symptoms of mental illness can be rated accurately through interviews with patients, VA said today.

Psychologists at the 12 hospitals already have interviewed nearly 2,000 patients admitted for severe mental illness (primarily schizophrenia) and have recorded on the rating sheet the degree or absence of symptoms such as withdrawal, anxiety, and disorganization of thinking.

The same group of patients is being interviewed and rated by the psychologists again. Two rechecks will be made, one at six months and the other at a

in atopic eczema

use new

Tubes of 5 and 20 Gm.

year after the original interview.

Comparison of ratings from the three sets of interview sheets will provide a statistical measure of improvement, VA said.

Some of the patients already have recovered sufficiently to leave the hospital and have returned home. Although successful release from the hospital is the most persuasive evidence of successful treatment, improvement in the hospital also is of importance, VA explained.

The rating sheet will be used by VA to help determine the relative effectiveness of different forms of treatment for mental illness and of different mental hospital designs and staffing patterns.

Sufficient accuracy and dependability in recognition of symptoms have been achieved to justify use of the form in large-scale research, VA said.

Development of the sheet is one of the basic steps in a five-year cooperative program known as the psychiatric evaluation project (PEP), which was started by psychiatrists and psychologists at the 12 VA mental hospitals in the summer of 1956,

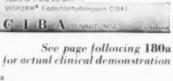
The hospitals are at Brockton, Mass.; Fort Lyons, Col.; Jefferson Barracks, Mo.; Lyons, N. J.; Marion, Ind.; Montrose, N. Y.; Palo Alto, Calif.; Roanoke. Va.; St. Cloud, Minn.; Salisbury, N.C.; Salt Lake City, Utah, and Topeka, Kans.

The headquarters office for the project is located at the VA hospital in Washington, D. C.

California VA Hospital Studies Asiatic Flu

To aid the nation in fighting Asiatic flu, the entire staff of the Veterans Administration hospital at Livermore,

-Continued on page 180a



and many other skin disorders

antibacterial antifungal anti-inflammatory

antipruritic

NOW...BREAK THE SHACKLES OF BRONCHOSPASM WITH NEW CHOLARACE

Formula: (in the coating) 20 mg. racephedrine HCl, 27.5 mg. pentobarbital, (in the core) 200 mg. choline theophyllinate (Choledyl®).

Indications: Bronchospasm associated with or due to asthma, hay fever, emphysema, bronchitis, bronchiectasis, and to pulmonary infections in general.

Average dosage: Adults, I tablet every 3 to 4 hours. Children, 10 to 15 years of age, 1 tablet every 4 hours.

Supply: 100, 500 tablets

The excellent clinical results obtained with Cholarace are based on the superiority of each of its three components. Choledyl is better tolerated than oral aminophylline. Racephedrine produces less CNS stimulation than ephedrine. Pentobarbital has faster and shorter action than phenobarbital.



NEPERA LABORATORIES DIV. Morris Plains, New Jersey

-Continued from page 178a

Calif., has volunteered to undergo a series of tests under a VA-Public Health Service research study.

VA doctors and technicians have begun taking blood samples from the more that 500 employees.

The samples will be sent to the United States Public Health Service communicable disease center serological laboratories to determine which employees have been attacked by the influenza virus and have built up immunity to the disease.

Dr. Harrison S. Collisi, manager of the Livermore hospital, said information provided by the blood tests will be used with a VA study of how Asiatic



See page opposite for actual clinical demonstration



before







n skin conditions like this...and many others

ore evidence for

EW Viotorm-Hydrocortisone Gream

Case was seen on April II for a vesicopustular eruption of left thumb of five weeks' duration. Diagnosis was hand eczema without evidence of fungus infection.

vioForm-Hydrocortisone Cream, prophyllin wet compresses and superficial X-ray permitted cleaning in 2 weeks. No record of relapse.

skin diseases of days, weeks or even years often respond dramatically to

NEW Vioform-Hydrocortisone Crea

anti-inflammatory

and in securities

antibacterial

antifungal

Supplied

VIOFORM-HYDROCORTISONE Cream, conte

iodochlorhydroxyquin 3% and hydrocortisone (free alcohol) 1% in a water-washable base. Tubes, 5 Gm. Tubes, 20 Gm.

VIOFORM® (iodochlorhydroxyquin CiBA)

Also Available

VIOFORM

Cream

Pov

ENTERO-VIOFORM

Tablet

1/20/01

CIBA Summo, N. J.

influenza is transmitted, particularly whether it is airborne or spread by direct contact.

Findings from the study, begun recently at the Livermore hospital, may make possible new methods of controlling influenza in future epidemics, Dr. Collisi said.

Carbon Monoxide Fumes on the Streets

Dr. Warren A. Cook of the University of Michigan School of Public Health and Institute of Industrial Health, is directing a study, in which municipal departments are cooperating, of the carbon monoxide gases that escape from automobile exhausts. There is no evidence at present that this gas is the direct cause of accidents, but it is known that carbon monoxide as compared with oxygen has 200 times the affinity for combining with hemoglobin. Losses of visual sharpness, increased drowsiness, and headaches could result from this chemical reaction. Another approach to the problem is the weather. Carbon monoxide analysis findings will be correlated with meterological data to examine any possible relationship between the type of weather and the concentration of carbon monoxide at the ground level.

Initial studies have shown a lower concentration of carbon monoxide in the air in depressed highways than on surface streets. This is explained by

-Continued on page 183a

EXCELLENT RESULTS IN IMPOTENCE...

as well as in the male climacteric and male senility . . . are being achieved with GLUKOR*, a fortified chorionic gonadotropin, clinically demonstrated to be safer and more effective than androgens. In a recent study¹, coitus was made possible in 85% of 67 cases of impotency with 1 cc. GLUKOR intramuscularly, and maintained once weekly or once monthly.

*Trade Mark, Patent Pending 1. Gould, W. L.: Impotence, M. Times 84:302 (March) 1956.

RESEARCH SUPPLIES
PINE STATION, ALBANY, N. Y.
Please send me:—
.......10 cc. vial(s) of GLUKOR-\$10.00 each
.......25 cc. vial(s) of GLUKOR-\$20.00 each
Literature on GLUKOR
Check enclosed Mail invoice

TO ORDER . ATTACH TO RX BLANK . MAIL TODAY

standardized calibration

The reliability of a blood pressure determination depends upon the standardized calibration of the liphygmomanometer. Similarly, the reliability of urine-sugar testing depends upon the standardization of the testing method.



color-calibrated CLINITEST

20000

montesugar ten

STANDARDIZED READING: full color calibration... blue-toorange spectrum long familiar to patients and physicians... clear-cut color reactions... invarying laboratory-controlled color seedle.

STANDARDIZED "PLUS" SYSTEM: established "plus" system... overs with critical range—does not omit %% (++) and 1% (+++)

STANDARDIZED SENSITIVITY: CLIMITERY is adjusted to optimal sensitivity...avoids confusing "trave" reactions.

CLINITEST is a copper-reduction test—s 15-year standard for unine-sugar testing "...which is easier than Benedict's...and more accurate...." "The simplicity, speed and accuracy of the Clinitest tablet reagent make it a desirable procedure for quantitation of uninery engar."

references 1. Came, S.; Brit. M. J. 2:827 (Oct. 6) 1986. b. Giordano, A. S.; Pepe, J. L., and Hagan, B.; Am. J. M. Teybael. 22:29,1996.



AMES COMPANY, INC . ELKHART, INDIANA . Ames Company of Canada, Ltd. Toronto

-Continued from page 181a

the facts that engine combustion is better with fewer stops, and that the depressed expressway provides a natural wind tunnel.

The study is financed by a grant of \$44,000 from the US Public Health Service.

Duke Professor on Tour of Far East

Dr. J. Lamar Callaway, Professor of Dermatology at Duke University Medical School has recently returned from a tour of US Air Force installations in the Far East. The Doctor visited all Air Force installations in the Far and Middle East. During a month's tour of duty as consultant in dermatology to the Surgeon General of the US Air Force, he examined patients suffering from skin disorders which, he said, are no more of a problem than they are at home, and consulted with medical officers on dermatology problems.

Dr. Callaway had high praise for US Air Force medical facilities in the Far East. "The physical equipment is excellent, medical staffs are extremely capable, and hospital libraries are stocked with up-to-date books," he said. "In addition to treating American servicemen, most of the station hospitals are engaged in research on medical problems native to their areas."

Grant to University of North Carolina

A grant of \$31,050 from the US Public Health Service has been made to Dr. Gordon Duggar, Assistant Professor of Surgery of the University of North Carolina School of Medicine. The three-year grant of \$10,350 a year will

-Continued on following page

when anxiety and tension "erupts" in the G. I. tract...

IN GASTRIC ULCER



PATHIBAMATE

Meprohamate with PATMILON® Lederle

Combines Meprobamate (400 mg.) the most widely prescribed tranquilizer ... helps control the "emotional overlay" of gastric ulcer — without fear of harbiturate loginess, hangover or habituation .. with PATHILON (25 mg.) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: 1 tablet t.i.d. at mealtime. 2 tablets at bedtime. Supplied Bottles of 100, 1,000.



-Continued from preceding page

be used for the study of the effects of pituitary gland operations on patients with cancer.

Oklahoma Appoints Head of Radiology Department

Dr. G. R. Ridings, formerly Associate Professor of Radiology, University of Mississippi Medical Center, has become the first full-time head of the Department of Radiology at the University of Oklahoma School of Medicine, Oklahoma City. His appointment now gives the school seven clinical departments with full-time directors.

Studies on the Heart at the University of North Carolina

Dr. K. L. White of the University of North Carolina School of Medicine has been granted \$41,975 by the National Heart Institute of the US Public Health Service for a three-year research project. Working with Dr. White, Assistant Professor of Medicine and Preventive Medicine, will be Dr. D. A. Martin, Research Fellow in Medicine of the American Heart Association, and Dr. Charles Vernon, Instructor in Psychiatry, both of the University of North Carolina School of Medicine. The title of the project is, A Study of Life Situations, Emotions, and Central Venous Pressure.

During the current year, \$11,845 will be expended on the study. A total of \$15,410 will be spent next year, and \$14,720 will be used during the third year of the project. This new US Public Health Service grant will be used to continue studies which have been in progress for about a year. The purpose of the study is to examine some of the

-Continued on page 186a



STEROSAN-Hydrocortisone

(chlorquinaldel GEIGV with hydrocortisone)

cream

comprehensive control of skin disorders

infectious dermatoses - contact dermatitis - atopic dermatitis - nonspecific pruritus

combats infection reduces inflammation controls itching promotes healing STEROSAN®-Hydrocortisone (3% chlorquinaldol GEIGY with 1% hydrocortisone) Cream and Ointment. Tubes of 6 Gm. Prescription only.

and when a nonsteroid preparation is preferred STERGEAN® (chlorquinaldol GEIGY) 3% Cream and Ointment. Tubes of 30 Gm. and jars of 1 lb. Prescription only.

GEIGY Arthley, New York

.

MEDICAL TIMES



Antihistamine action would have helped...

When Pandora's box was opened, allergens must certainly have been among the evils she released. 'PERAZIL', the effective, long-acting antihistamine would have helped then as it does now. A single dose usually gives dramatic relief to allergic patients for a 12- to 24-hour period, and side effects are generally mild and infrequent.

PBRAVAIT

prolonged relief

few side effects

For children and adults: Sugar-coated Tablets of 25 mg. Scored (uncoated) Tablets of 50 mg.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

-Continued from page 184s

events and mechanism which may be related to the development of heart failure in patients with organic heart disease at particular times in their lives. Many different factors may frequently be important in producing heart failure in patients with diseased hearts. Among these are strenuous exercise, infection, injury, and the failure to take prescribed drugs:

Grant to Creighton

A \$1,343 continuation of a US Public Health Service research grant has been received by Dr. Theodore J. Urban, Assistant Professor of Biology at Creighton University. The grant is for research on the effects of manganese in the body.

Infantile Paralysis Grant to Hospital

The Poliomyelitis Respiratory and Rehabilitation Center at Creighton Memorial-St. Joseph's Hosptial has received a \$72,024 grant from the National Foundation for Infantile Paralysis. The Center in Omaha is one of 15 supported by the National Foundation in various parts of the United States. Work at the Center includes patient care, teaching of new technics for patient care to doctors and other professional workers, and research in the field of respiratory problems, and evaluation of equipment used by paralyzed patients.

Bacterial Diseases Studied at Syracuse

Bristol Laboratories, Inc., Syracuse, New York, has made another grant continuing its support of antibiotic research at the State University of New York Upstate Medical Center in Syracuse. The grant totals \$19,384 and is administered by the Research Foundation of the State University. It is the largest single amount ever awarded by Bristol Laboratories which has supported the research for the past nine years. In the laboratory, test-tube studies are made of drugs and combinations of drugs to determine their effectiveness in destroy-

In TENSION, Anxiety, Fear, Compulsion and Depression



SUAVITIL.

(BENACTYZINE HYDROCHLORIDE)

Often effective where other psychotropic agents often fail.

Suavitil reduces the psychosomatic interplay implicated in many functional and organic disorders. Helps restore proper emotional perspective. ing specific bacterial infections in humans.

After the drugs prove their usefulness in the laboratory tests, they are used to help patients. Bacterial diseases such as pneumonia, meningitis, bacterial endocarditis and staphylococcal infections, particularly those which are or have become resistant to penicillin, are being studied.

Cardiovascular Research at Georgia

A grant from the National Heart Institute, US Public Health Service, of \$300,297 has been awarded to W. F. Hamilton, Ph.D., Professor of Physiology, and R. P. Ahlquist, Ph.D., Professor of Pharmacology, University of Georgia School of Medicine, Augusta, to continue a postgraduate cardiovascular research and training program for the next six years.

Bacterial Cells Studied

Dr.J. H. Schwab of the University of North Carolina School of Medicine has received a \$1,000 grant from the United Medical Research Foundation of North Carolina. The funds will be used to continue a research project already underway in which extracts of streptococcal cells are being studied to detect toxic products of the organism. Dr. Schwab, Assistant Professor of Bacteriology, is working jointly with Dr. William J. Cromartie, Associate Professor of Bacteriology and Medicine.

Grant to College of Medical Evangelists

A three-month pilot-study grant from the National Institute of Health has been awarded to faculty members of the College of Medical Evangelists School of Medicine, Department of Internal Medicine. The \$1,973 fund will provide for supplies and equipment to be used in an evaluation of the advantages of the timed vectocardiogram as a clinical tool.

Course in Radiological Safety

A two-week full-time course in Radiological Safety will be given January 6-17, 1958, by the Institute of Industrial Medicine of New York University-Post

In Tension, ANXIETY, Fear, Compulsion and Depression

SUAVITIL

Suavitil is also an antiphobic, antiruminant and differs fundamentally from any of the other agents in this field.

Often effective where other psychotropic agents often fail.

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Graduate Medical School in cooperation with its New York University College of Engineering and the United States Atomic Energy Commission. The course is designed for industrial physicians, industrial hygiene engineers, public health officials, and individuals in industrial and university research laboratories who are responsible for radiological safety. Particular attention will be given to radiation problems in industry associated with the use of radioisotopes and radiation sources including industrial X-ray and power reactors. Covered will be such topics as nuclear physics, the biological effects of radiation protection, and governmental codes and regulations.

Dr. Luisada to Lecture in South America

Dr. Aldo A. Luisada, Director of the Division of Cardiology of the Chicago Medical School, has been invited by the heart associations of five South American countries to give lectures in Peru, Chile, Argentina, Uruguay and Brazil. Twenty-two lectures will be given in all. Dr. Luisada, a graduate of the Royal University of Florence, has recently assisted in the development of methods which now make it possible to obtain heart sounds and their recording from inside the left heart.

Research on Aging at Duke

Plans for a major scientific attack on the problems of aging were revealed at Duke University with the announcement that a pioneer Regional Center for Research on Aging will be established on the University campus. The proposed Center will be based administratively in the Duke University School of Existing laboratories and Medicine. other facilities in the Medical School and Duke Hospital will be used for the Center's program. Also, additional research space is now being prepared in a new seven-story addition to Duke Hospital, and in a wing being added to the Bell Medical Research Building at Duke.

The first of its kind in the nation, the Center will be supported in part by a US Public Health Service grant expected to total more than \$1,500,000 over a

In Tension, Anxiety, FEAR, Compulsion and Depression



SUAVITIL

(BENACTYZINE HYDROCHLORIDE)

Often effective where other psychotropic agents often fail.

Suavitil reduces the psychosomatic interplay implicated in many functional and organic disorders. Helps restore proper emotional perspective. five-year period. The Center will serve as a pilot project in the Southeast and its success may determine whether or not similar undertakings will be launched in other regions with support from the National Institutes of Health of the US Public Health Service.

"And it is the first time, to my knowledge," said Surgeon General Leroy E. Burney, "that one of the leading institutions of higher learning in this country has set out, in a deliberate fashion, to mobilize its extensive resources in search of better understanding of the processes of aging — one of modern man's most challenging problems."

Dr. John H. Ferguson Honored

Dr. John H. Ferguson, Head of the Physiology Department of the University of North Carolina School of Medicine at Chapel Hill, has been awarded the Doctor of Science degree by his alma mater, the University of Cape Town, South Africa. It was awarded to Dr. Ferguson for his research in the field of blood coagulation and hemorrhagic diseases.

Dr. Hiatt to Work with US Air Force

Dr. E. P. Hiatt of the University of North Carolina School of Medicine has accepted a research position as a civilian with the United States Air Force. Dr. Hiatt, an Associate Professor of Physiology, will be Chief of the Acceleration Section and Consultant to the Biophysics Branch of the Aero-Medical Laboratory at Wright-Patterson Air Force Base near Dayton, Ohio.

Grant to Memorial Hospital at the University of North Carolina

Memorial Hospital at the University of North Carolina is the recipient of a grant of \$22,000 from the Tri-Sigma national social sorority for expansion of the space and facilities for crippled and sick children in the Pediatrics Ward. The grant will be met by matching funds from the North Carolina Medical Care Commission.

Space for therapy technics, observation room, interview room, and other facilities will be available to aid in the children's treatment. This reconstruc-

In Tension, Anxiety, Fear, COMPULSION and Depression

SUAVITIL.

(SENACTYZINE HYDROCHLORIDE)

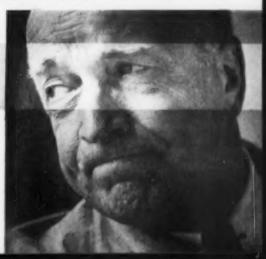
Suavitil is also an antiphobic, antiruminant and differs fundamentally from any of the other agents in this field.

Often effective where other psychotropic agents often fail.



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tion will add a net space of 1800 square feet to the present overcrowded therapy area. Student doctors and nurses will be able to observe expert therapy technics from an observation room with one-way glass. This project will be a vehicle for dietary, emotional and physical therapeutic aid to the patients.

Water Fluoridation

Regarding the controversial issue of water fluoridation, Dr. Louis I. Dublin, public health authority and consultant to the Institute of Life Insurance, has this to say, "Today many millions of children are being deprived of the advantages water fluoridation could furnish them. This deprivation is due in part to the familiar resistance of suspicious people whose counterparts once opposed vaccination and pasteurization.

"Water fluoridation is the most effective and least costly preventive dental health measure available; it is completely safe. Despite an annual investment estimated at a billion and a half dollars in dental bills, only a small percentage of the American people receive adequate dental treatment, and current facilities and personnel cannot permit us to catch up with accumulated dental defects. It can do nothing for the cavities and disfigurements people already have, and it cannot take the place of a good balanced diet. It should never be regarded as a substitute for keeping the teeth clean or for periodic care by a good dentist."

Dr. Jensen Appointed

Arthur V. Jensen, Ph.D., has been appointed assistant dean at New York Medical College, Flower and Fifth Avenue Hospitals. Dr. Jensen has been Associate Professor in the Department of Anatomy at the College for the past four years, and he will continue in that position.

Stanford Medical Center

Construction of a \$1,500,000 Rehabilitation Center building, the second unit of the multi-million-dollar Stanford Medical Center, will commence in the near future. The structure will contain

In Tension, Anxiety, Fear, Compulsion and DEPRESSION



SUAVITIL

Often effective where other psychotropic agents often fail.

Suavitil reduces the psychosomatic interplay implicated in many functional and organic disorders. Helps restore proper emotional perspective.

Suavitil is also an antiphobic, antiruminant and differs fundamentally from any of the other agents in this field. three stories and 83,000 square feet. Its facilities will include offices, laboratories, conference rooms, audio and treatment rooms, a gymnasium, a large hydrotherapy pool, and a library.

Rehabilitation facilities will occupy most of the first two floors. A portion of the Stanford out-patient clinics, plus Medical School teaching and research laboratories, will occupy the remaining space. The Rehabilitation portion will cost over \$800,000, to be shared equally by the Federal and State governments and Stanford. The University will pay for the remainer fo the building. The Rehabilitation Center will provide comprehensive medical care designed to hasten convalescence and restore each patient to maximum use of his abilities. Rehabilitation is a modern concept of patient-oriented medical care, as opposed to the disease-oriented approach of the past. It is a teamwork approach in which the rehabilitation goal is set by the patient himself with the aid of his physician and the rehabilitation specialists. Under the physician's leadership, the team work with the patient's

family, employer, and community to smooth the way back to a normal, welladjusted life.

Plans for the Rehabilitation Center were more than five years in the making. Its program embodies the best features of similar programs throughout the country, as well as the advice of expert outside consultants.

Work has already begun on the Medical Center's 440-bed combined Palo Alto-Stanford Hospitals. Completion of both units is scheduled by January 1959, with operations commencing a few months later.

Psychiatric Center at the North Carolina Memorial Hospital

Work is nearing completion on a \$300,000 building program at the Psychiatric Center of the North Carolina Memorial Hospital of the University of North Carolina in Chapel Hill. Dr. Robert R. Cadmus, Director of Memorial Hospital said that 50 per cent of the funds required for the project are being supplied by the Federal govern-

-Continued on following page

In Tension, Anxiety, Fear, Compulsion and Depression

SUAVITIL

Often effective where other psychotropic agents often fail.

Recommended dose: 1 mg, t.l.d. for two or three days; this may be increased gradually to 3 mg, t.l.d. Supplied: 1.0 mg, scored tablets of benactyzine hydrochloride – bottles of 100.
Suavitti is a registered trademark of Merck & Co., Inc.



Literature available upon request:

Professional Service Dept.,
Merck Sharp & Dohme, West Point, Pa.

-Continued from preceding page

ment through the North Carolina Medical Care Commission, and the remainder comes from the State. The ground floor of the main building will contain laboratories, offices and treatment rooms for the out-patient department of the Psychiatric Center.

Dr. Van Cleave to Work with Atomic Energy Commission

Dr. Charles D. Van Cleave of the University of North Carolina School of Medicine will be given a two-year leave of absence to work with the US Atomic Energy Commission. He is Associate Professor of Anatomy, and has been on the faculty of the School since 1940.

Dr. Van Cleave's leave was requested

in infectious

use new

eczematoid dermatitis

by the Atomic Energy Commission. He will work with the government agency in the study of bone metabolism and bone marrow replacement therapy in relation to the fallout from the atmosphere following the test of nuclear weapons. In his new position, the Doctor will be in contact with research developments in this field all over the world. Another one of his duties will be to assist in coordinating the activities of the various groups working on the project within the United States. His headquarters will be in Washington, D. C.

U.S. Steel Foundation Grants

The U. S. Steel Foundation, Inc. has announced a program of aid-to-education with grants payable in 1957 totaling \$1,300,000. All 82 medical schools will receive assistance.

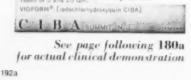
American Heart Association Grants

For the twelve months beginning July 1, 1957, 155 scientists will carry on intensive research on the causes of coronary attacks, and on biochemical and physiological processes associated with heart failure and hypertension. Work on dry-field heart surgery will continue. These projects are being financed by a grant of \$977,000 from the American Heart Association.

Grants to Temple University School of Medicine

Two grants totaling \$82,368 have been received by the Temple University School of Medicine from the Public Health Service for cancer studies. The amount of \$70,569 will be used for a three-year study of radiation dosage

-Continued on page 194a



antifungal anti-inflammatory

antipruritic

and many other skin disorders



CYTOFERIN

is the logical combination in iron deficiency anemias

"Cytoferin" combines vitamin C and ferrous iron to provide the direct approach to greater iron absorption and utilization because:

- Iron is absorbed only in the reduced ferrous form.
- Ingested iron can be maintained in a reduced state only in an acid environment.
- Vitamin C given with iron acts as an acidifying and reducing agent at the site of maximum absorption.
- Vitamin C increases the availability of iron for hemoglobin and red blood cell formation, as well as to build body reserves.
- The combination of iron and vitamin C is likely to be better tolerated than iron alone.

"Cytoferin" Tablets - No. 705, bottles of 100 and 1,000. "Cytoferin" Liquid - No. 945, bottles of 8 fluidounces. Stable liquid preparation; nonalcoholic; extremely palatable; may be taken undiluted.

Each tablet or 10 cc. (2 tsp.) contains: Ferrous sulfate⁴ (3 gr.) 200 mg. Vitamin C (ascorbic acid) *Exsiccated in the tablets, and U. S. P. in the liquid.

Suggested dosages: To be taken preferably with meals. Adults and children: 1 tablet or 2 teaspoonfuls (10 cc.) two or three times daily. Infants and children: 1 teaspoonful (5 cc.) two or three times daily depending on age."



Bibliography available on request.

AYERST LABORATORIES . NEW YORK, N. Y. . MONTREAL, CANADA &

-Continued from page 192a

levels. \$11,799 will be utilized for a project on transferable leukemia.

Albany Medical College Receives Grant

The U. S. Public Health Service has granted \$8,278 to the Albany Medical College to continue a study of the influence of general anesthesia on breathing.

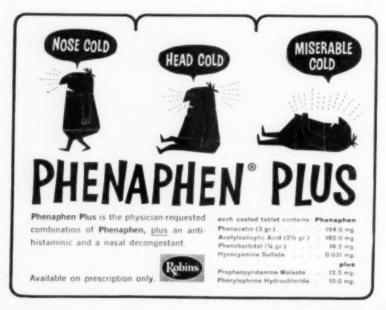
Richmond Poison Information Center

Owing to the number of fatalities caused by the ingestion of common solid and liquid household articles, a number of "poison information centers" have been established throughout the country with the assistance of several interested groups including the Medical College of Virginia. The Richmond Poison Information Center began operation on March 15, 1957 on a 24-hour service basis. The primary function will be to supply physicians with information regarding the poison constituents of suspected preparations or plants, and the best means of treatment. The center will also provide educational programs aimed toward the prevention of poisoning.

Army Grant to Jewish Hospital

The Jewish Hospital of St. Louis has received a grant of \$10,000 from the Research and Development Division of the Office of the Surgeon General, U. S. Army. The present experiments, being financed by the Army, are designed to investigate the effect and timing of vascular fluid replacement in an effort to

-Continued on page 196a







The warming relief provided by Numotizine in tonsillitis, bronchitis and related respiratory conditions is welcomed by the patient, helpful to convalescence.

An application of Numotizine causes vasodilation and produces analgesia to assist decongestion and relax the patient, thereby hastening recovery.

Numotizine is easy to apply, requires no heating, and relieves for eight or more hours without changing. It is compatible with the use of such specific medication as may be indicated.

NUMOTIZINE

CATAPLASM-PLUS

Supplied in 4, 8, 15 and 30-oz. jars.

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-Continued from page 194

provide better protection of undernourished subjects undergoing surgery.

Medical Schools in the Far East

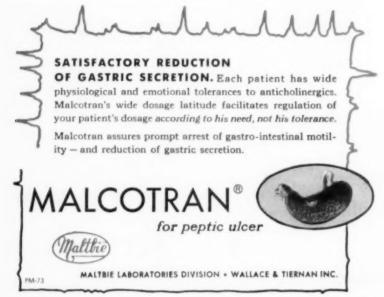
Dr. W. D. Forbus, Pathologist at Duke University, on an extended tour, visited most of the medical schools in the Far East. He points out that the shortage of physicians in all of the countries he visited is acute. At the same time, medical teaching facilities are entirely inadequate for the number of applicants. In dealing with this situation, faculty members and educational agencies, who are most desirous of maintaining high scientific standards. are faced with constant pressure to admit more students than they can handle adequately. In some instances, as in

Indonesia, the government demands more admissions to the already overcrowded medical schools, failing to appreciate that "a bad doctor is worse than no doctor at all."

Foreign Scientists Study Rehabilitation

The Institute of Physical Medicine and Rehabilitation at the New York University-Bellevue Medical Center is presently training a team of five medical investigators from Burma. Groups from Thailand and from Colombia have also received a year's training at the Center. Respective governments and the Office of Vocational Rehabilitation at Washington, D. C., sponsor this team concept of rehabilitation training for foreign medical groups which operates under a grant of \$30,000 from the Rockefeller Foundation.

-Continued on page 198a





Parkinson's disease

PANPARNIT

hydrochloride

helps patients to help themselves

Most distressing of all to the parkinsonian patient is his muscular rigidity...a pathologically imposed strait jacket that forces him to depend on others for many of his needs.

> PANPARNIT..."the drug of choice" in 62 per cent* of cases...generally affords substantial relief of spasm, restoring the patient's ability to care for himself and boosting his morale. In many instances PANPARNIT also produces gratifying relief of tremor.

A gradually increasing schedule of dosage is recommended for optimal results.

> *Schwab, R. S., and Leigh, D., J.A.M.A. 139:629, 1949.

PANFARNIT® hydrochloride (caramiphen hydrochloride GEIGY). Sugar-coated tablets of 12.5 mg. and 50 mg.

GEIGY

Ardsley, New York







See page following 180a for actual clinical demonstration

NEWS AND NOTES

-Continued from page 196a

Syphilis Increases

As reported by the American Social Hygiene Association, a national survey has shown an increase of syphilis in the United States for the first time since 1948. The study was compiled from the reports of 145 health departments representing 48 states, 94 of the nation's cities with populations over 100,000. and three territories. Venereal disease rates are rising statewide in 19 states; control programs are inadequate in 35 states; the disease in the teenage group is increasing in 11 states; new epidemic outbreaks are reported in 19 states, while Armed Forces personnel, transient laborers, and other mobile groups are listed by 32 states and 15 city health officers as major problems in venereal disease control.

Cancer of the Brain Treated

A grant up to \$250,000 from the Rockefeller Foundation has been received by the Massachusetts Institute of Technology, Cambridge, for medical treatment and research in connection with the nuclear reactor now under construction at the Institute. This was made possible by an award of \$500,000 from the National Science Foundation. The first use of these facilities will be for treatment of cancer of the brain. The patient is given a boron compound which concentrates rather selectively in the cancerous tissue in the brain. Thermal neutrons streaming through the aperture from the reactor penetrate the cancerous area and cause the boron to release alpha particles which damage or

-Continued on page 200s

New! Theradan with Sarthionate

Clears up the severest dandruff with just 3 applications



RELIEF LASTS FOR MONTHS

Twenty months of clinical investigation on dandruff demonstrate complete clearing of scaling in all cases, usually with just three applications of easy-to-use Theradan. Dandruff cases resistant to resorcin, sulfur and selenium preparations clear promptly and safely with new Theradan.

Relief of scaling is long-lasting—scalp stays clear for 1 to 4 months.

HOW THERADAN ACTS

THERADAN is a therapeutic formula not a shampoo or tonic. THERADAN contains Sarthionate, our trademark for a distinctive new combination of a special form of sulfur and a wetting agent.

This unique solution not only clears loose dandruff, but also removes dead tissue by penetrating the outermost layers of the scalp. In mild or moderate cases of seborrhea, Therradan is left on the scalp for ½ to 1 hour before shampooing. In severe cases, Therradan is left on up to eight hours or over night.

Theradan

active ingredients

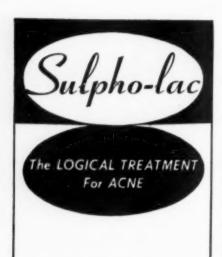
Carthianala

bis (serytrimethylammenium; polythiosate (by weight) 2.0%, tatradacylamine a laureyl sarcasine . . . (by weight) 0.5%, child steahed

For more information about the clinical background of Therandam, write to Medical Director, Dept. M 107

Sheradan Annoper

Bristol-Myers Co. 19 W. 50 St. New York 20, N. Y.



Samples on request,

KELGY LABORATORIES

160 E. 127th ST., NEW YORK 35, N. Y.



See page following 180a for actual clinical demonstration

NEWS AND NOTES

-Continued from page 198a

destroy the cancerous tissue in their path,

A Commissurotomy During Pregnancy

From California comes a report of a commissurotomy successfully performed at the Loma Linda Hospital and Sanitarium. The patient was a young woman of 22 years in the second month of her first pregnancy. The operation which would not normally be performed under such circumstances was made necessary by the increased load to the heart caused by the pregnancy. At term, the patient was delivered of a normal male infant.

Hematology Studies at Creighton University

Three members of the Department of Medicine at Creighton University have received three-year grants of \$10,000 each per year. Working with a full-time trainee each year, a program for training in hematology will be conducted. The purpose of these grants from the National Institute of Arthritis and Metabolic Diseases is to stimulate interest in blood diseases, according to Dr. John R. Walsh who will direct the program.

Linear Electron Accelerator Aplied to Cancer Therapy

Stanford University School of Medicine has released a report on the use of its six-million-volt linear electron accelerator for cancer therapy. The medical accelerator is a scaled-down version

-Continued on page 202a

MEDICAL TIMES

not an antacid not an antispasmodic not an anticholinergic not a sedative

but

A NEW NUTRITIONAL TREATMENT FOR PEPTIC ULCER

Bxul

- · relieves symptoms in a few days
- · heals ulcers within one to three weeks
- · heals in the presence of acid
- · has no side effects

EXUL's principal ingredient is NUPRA, a non-hormonic, non-steridic extract of beef organs: liver, brain, adrenals. EXUL also supplies dehydrated cream and milk, ferrous gluconate, thiamin, niacinamide and flavoring extracts. Each wafer supplies approximately 135 calories.

EXUL is supplied in hermetically-sealed tins containing 5 wafers. *Dosage* is 5 wafers or less daily, depending on the severity of the case.



Complete literature is available on request to Medical Department.

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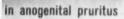
Laryngologist Albert McKeever
Would sniffle and sneeze with hay fever,
Till an R.N. one day
Put him wise to a spray—
BIOMYDRIN—hay-fever reliever!



Biomydrin nasal spray



NEPERA LABORATORIES DIV. Morris Plains, New Jersey





and many other skin disorders

Hydrocontison

Cream

antibacterial antifungal anti-inflammatory antipruritic

VIOFORM⁶ (redechlorhydroxyguin CIBA)

C I B A SUMMIT, N. J.

See page following 180a for actual clinical demonstration

NEWS AND NOTES

-Continued from page 200s

of the University's seven hundred-million-volt linear accelerator used in nuclear research. Unlike the atom smashers that whirl atomic particles in a circle, the linear accelerator fires them in a straight line. As it emerges from the tube, the electron beam is converted to X-rays. The machine's principal advantage is its high energy. The six-million-volt X-rays deliver a deeperlevel maximum dose than do the conventional X-rays, thus minimizing damage to skin surfaces. Moreover, the high-energy beam penetrates both hard and soft tissue thereby eliminating "bone shadows."

A wide variety of primary tumors were represented in the report. Of 74 patients treated, all trace of cancer growth were eliminated in 48. In five others, the primary growth responded but metastasis was already present. Of the remaining members of the group in whom response was poor, 11 had been treated previously by conventional Xrays, and in seven patients the tumor remained uncontrolled. Three individuals failed to return for follow-up. The patients averaged from 30 to 35 treatments over periods of five to eight weeks. The usual total dose was 6,000 roentgens.

Mothers Who Smoke

From the College of Medical Evangelists School of Medicine at Loma Linda, California, comes a report from their faculty member, Dr. Winea Simpson, which she bases on data collected from

-Continued on page 204a



"Mommy, play with me, Mommy!"

She can, now. But only a short time ago Doris never had time for the kids.

A "crazy-clean" housekeeper, she chased dirt and germs all day long. This endless ritual seemed pointless, even to her, yet she couldn't help herself.

She became short-tempered with the children . . . eried for no reason at all . . . was depressed and indecisive. Because her compulsiveness crowded out normal living, and Doris was on the brink of a serious breakdown, Pacatal was instituted:

25 mg. t.i.d. Pacatal therapy released this housewife from the grip of

her neurosis.

For patients on the brink of psychosos,
Pacatal provides more than tranquilization. Pacatal has a "normalizing"
action, i.e., patients think and respond
emotionally in a more normal manner.
To the self-absorbed patient, Pacatal
restores the warmth of human fellowship
... brings order and clarity to muddled
thoughts... helps querulous older
people return to the circle of
family and friends.

Pacatal, in contrast to earlier phenothiazine compounds, and other tranquilizers, does not "flatten" the patient. Rather, he remains alert and more responsive to your counselling. But Pacatal, like all phenothiazines, should not be used for the minor worries of everyday life.

Pacatal has shown fewer side effects
than earlier ataraxies; its major benefits far outweigh
occasional transitory reactions. Complete dosage
instructions (available on request) should be consulted.

Supplied: 25 and 50 mg, tablets in bottles of 100 and 500,

Also available in 2 cc. ampuls (25 mg./cc.)

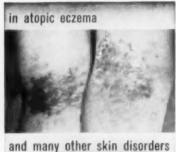
for parenteral use.

back from the brink with Pacatal

ARNER-CHILCOTT

BERVICE TO THE MEDICAL PROPERSION





and many other skin disorders
use new Vioform*

Hydrocortisone
Cream antibucterial antifungal anti-inflammatory

Tubes of 5 and 20 Gm. antipruritic
VIOFORM® (iodochlorhydrosysuin CIBA)

C. I. B. A. SUMMIT, N. J.

See page following 180a for actual clinical demonstration

NEWS AND NOTES

-- Continued from page 202a

7,499 patients in two private hospitals and in the San Bernardino County Hospital. In the private hospitals, the number of premature births was approximately twice as great for mothers who smoke; the rate increasing with the number of cigarettes smoked per day. At the county hospital, socio-economic factors entering the picture inhibited a definite conclusion. The doctor expects to include a much larger group of premature infants in a subsequent report.

The Salk Vaccine

Dr. Thomas Francis, Jr., of the Department of Epidemiology, University of Michigan, recommends that children. having received three Salk vaccine injections a year or more ago, should now receive a fourth "booster" innoculation. He does not believe that the fourth injection should be considered an annual necessity, but should be used until a more complete knowledge of the action of the drug becomes available. While the doctor does not necessarily credit the vaccine with the lowered number of cases of poliomyelitis in 1957, he considers that there is clear evidence of a lessened incidence of severity in the children who have been vaccinated, and also a decided decrease in the number of paralytic cases in the five-to-nine-year age group,

Mercy Hospital of Chicago

In its recent receipt of \$84,950 from the Ford Foundation, Mercy Hospital of Chicago has received the second half of the Foundation's grant.

-Concluded on page 206s

MEDICAL TIMES

ODORLESS HOME DISINFECTION

Here's an important thought: do your patients know about safe and odorless disinfection in home and sickroom to prevent spread of disease? Recommend a 1:5000 solution of aqueous Zephiran to disinfect utensils and sickroom supplies, to rinse diapers, and to sanitize linens, toys and furniture. It's economical!



EFFICIENCY IN DAILY PRACTICE

You can save a mile a day when you keep bottles of Zephiran tincture within reach in the various treatment areas of your office. Use it as a pre-injection swab, to paint the operative site before minor surgery, for application in the treatment of countless dermatologic conditions, in fungus infections, and for many other purposes.



WET COMPRESSES AND DRESSINGS

Nonirritating antiseptic wet dressings and compresses are prepared with 1:5000 Zephiran aqueous solution, without fuss or waste of time.* Zephiran is always ready to do an efficient job whatever the specific application.





LET ZEPHIRAN WORK FOR YOU

Zephiran is dependable, safe and economical. A refined cationic detergent with unusual wetting and spreading ability as well as a highly potent antiseptic - Zephiran kills many gram-positive and gram-negative bacteria in seconds. It is nonirritating and virtually nontoxic. Zephiran has hundreds of uses in daily practice.

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ephiran

Winthrop LABORATORIES, New York 18, N. Y.

REFINED), TRADEMARK REG. U. S. PAT. GFF.

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-Concluded from page 204a

In a talk before the Michigan Dietetic Association, Dr. L. J. Baer, heart specialist at the University of Michigan, pointed out that persons who follow the current fad for non-fat diets run the risk of doing irreparable harm to their liver and kidneys. The Doctor criticized the "mass hysteria" which has followed attempts to link the consumption of fatty foods with atherosclerosis. Rather than force the entire blame for the disease on fatty foods and alcoholic drinks, a combination of factors may well contribute to the cause, not the least of which is the individual's reaction to stress and strain. While the type of diet may affect atherosclerosis, the body requires a certain amount of fatty acids. Trends capable of inflicting serious dam-

Atherosclerosis and Fatty Foods

age on vital organs should not be followed indiscriminately.

Public Health Service Aid for Research Facilities

The U. S. Public Health Service has approved the awarding of grants to aid in construction or improvement of research facilities. Among the recipients are the University of Minnesota with a grant of \$1,006,015; the Bowman Gray School of Medicine, \$598,473, and \$400,000 to the University of Oklahoma Medical Center,

Dr. Andrews Named to New Post

Justin M. Andrews, Ph.B., President of the American Society of Tropical Medicine and Hygiene, has been named by the Surgeon General as Director of the National Institute of Allergy and Infectious Diseases of the National Institute of Health.

when anxiety and tension "erupts" in the G. I. tract...

IN DUODENAL ULCER



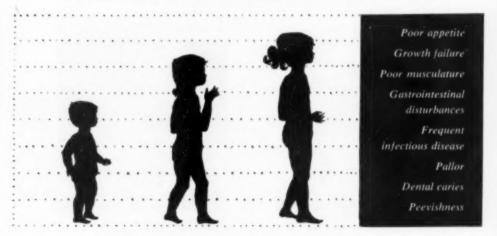
Combines Meprobamate (400 mg.) the most widely prescribed tranquilizer . . . helps control the "emotional overlay" of duodenal ulcer - without fear of harbiturate loginess, hangover or habituation ... with PATHILON (25 mg.) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: 1 tablet t.i.d. at mealtime, 2 tablets at bedtime. Supplied: Bottles of 100, 1,000.



*Fragionari - Billegistered Trademark for Fridingsethyl lodide Loderla LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

THE LOW PROTEIN PROFILE?



Habitually low intake of high quality protein foods, such as meat, fish, eggs or cheese, leads to the common childhood syndrome of hypoproteinosis - recognizable by the signs and symptoms of the LOW PROTEIN PROFILE.

Cerofort Drops and Cerofort Elixir can help these children!

The essential amino acid, lysine, will increase the nutritional value of the marginal protein in bread, cookies, macaroni, or other cereal foods. In these low quality proteins, lysine establishes an amino acid pattern similar to that of high quality protein, thus approximately doubling their tissue-building value. The B vitamins will stimulate lagging appetites so that more food of better quality will be consumed.

Long established dietary habits are slow to change, but Cerofort Drops and Cerofort Elixir work quickly. They have been developed for your LOW PROTEIN PROFILE patients.

FOR INFANTS AND CHILDREN UP THROUGH FOR OLDER CHILDREN AND THE EARLY SCHOOL YEARS-CEROFORT DROPS

The daily dose of 1.5 cc. provides

title marris manner or time or be-					
L Lysine Monohydrochlorid	e				450 mg.
Vitamin B ₁₂				,	25 mcg.
Thiamine Hydrochloride					10 mg.
Pyridoxine Hydrochloride					5 mg.
Alcohol 1%					

*approximately equivalent to 340 mg. of L-lysine

Pleasant tasting, readily miscible with all liquid foods. Recommended dose: one dropperful (0.5 cc.) t.i.d. at mealtime for maximal benefit of lysine fortification. For infants, add 0.5 cc, to formula t.i.d. Shake to mix. Or, add three 0.5 cc. dropperfuls to entire day's supply of formula after mixing ingredients and before bottling.

Supplied in bottles of 24 cc. with dropper marked to deliver approximately 0.5 cc.

ADOLESCENTS-CEROFORT ELIXIR

The daily dosage of 3 teaspoonfuls (15 cc.) one with each meal provides:

L-Lysine Mon-	oh	dro	chle	orid	er			790 mg.
Vitamin B ₁₂	,							25 mcg.
Thiamine Hyd	Iro	chlo	ride					10 mg.
Riboflavin								10 mg.
Pyridoxine Hy								2 mg.
Niacinamide					-			100 mg.
Panthenal.								20 mg.

Alcohol 5% *equivalent to 600 mg. L-lysine

Supplied in bottles of 8 fl. oz. and gallons

USE

ofort drops

L-lysine and important B vitamins

first with lysine



WHITE LABORATORIES, INC. Kenilworth, N. J.

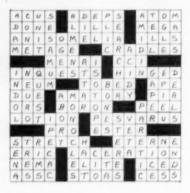
WHO IS THIS DOCTOR?

(from page 53a)

SILAS WEIR MITCHELL

MEDICAL TEASERS

Solution to puzzle on page 41a



in contact dermatitis



and many other skin disorders use new Vioform®

Cream

antibacterial antifungal anti-inflammatory antipruritic

Tubes of 5 and 20 Gm.
VIOFORM® (iodochiorhydroxyquin CIBA)

C I B A SUMMIT, N. J. 2/242000

See page following 180a for actual clinical demonstration



PHENAPHEN° PLUS

Phenaphen Plus is the physician-requested combination of Phenaphen, plus an anti-histaminic and a nasal decongestant.

Available on prescription only,



each coated tablet contains: Phenaphen

Prophenpyridamine Maleate
Phenylephrine Hydrochluride

12.5 mg. 10.0 mg. for the first few days of life

VI-PENTA #1

provides K, E, and C, the vitamins needed particularly by prematures and newborns.

for infants and young children

VI-PENTA #2

provides vitamins A, D, C, and E. essential for normal development.

for all ages

VI-PENTA #3

provides A, D, C, and 5 B-complex vitamins for the greater nutritional demands of the growing years.







Identical in content and taste to the long-established Vi-Pentax Drops.

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New, objective evidence:

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The local and systemic effects of BAUME BENGUÉ were evaluated by entirely objective methods in 211 subjects of both sexes suffering from various types of chronic arthritis. bursitis, neuralgia, myalgia and lumbago. Changes in range of joint motion were determined by goniometer and by flexion. Topical application of BAUME BENGUÉ measurably improved articular function in 94% when physical therapy was also used, and in 61% without adjunctive treatment. Efficient salicylate absorption was indicated by an average urinary excretion of 15 mg, in 24 hours. No ill effects were reported or observed.

Benefits of Topical Salicylate

in chronic rheumatic disease

Menthol induced hyperemia plus high local concentration of salicytate has been rediscovered as one of the most promptly effective remedies for rheumatoid discomfort due to exposure.



This controlled study offers new evidence of the efficacy and safety of local treatment of chronic rheumatic disease with BAUME BENGUÉ, one of the most reliable formulae at the physician's disposal.

Brusch, C. A., et al.; Md. State Med. J.; 5:36, 1956.

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AVAILABLE:

ADRESTAT capsules and lozenges, each containing. Adrenochrome Semicarbazone	2.5 mg
(present as Carbazochrome Salicylate*, 65.0 mg	
Sodium Menadiol Diphosphate (Vitamin K Analogue)	5.0 mg
Hesperidin, Purified	50.0 mg
Ascorbic Acid	100.0 mg
Capsules in boxes of 30; Lozenges	in boxes of 20

ADRESTAT (F) - I-cc ampuls, each containing:

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Baxes of five 1-cc ampuls



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